

PARENT-THERAPIST ALLIANCE, TECHNOLOGY USE, AND TREATMENT  
OUTCOMES IN BEHAVIORAL PARENT TRAINING: A PRELIMINARY  
INVESTIGATION

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## ABSTRACT

Margaret T. Anton: Parent-Therapist Alliance, Technology Use,  
(Under the direction of Deborah J. Jones)

Although technology-enhanced services are posited to promote therapeutic alliance, a critical element of treatment engagement, relatively little research has examined this hypothesis, particularly with treatments targeting child mental health. As such, this study preliminarily examined the link between parent-therapist alliance and a range of treatment outcomes between the standard treatment for early onset disruptive behavior disorders, Behavioral Parent Training (BPT), and a technology-enhanced version. Findings revealed small to moderate effects of alliance on outcomes for both groups; however, differences in patterns of alliance and technology use *within* the technology-enhanced group suggest implications for better understanding the impact of technology on the therapeutic process, the deployment of existing technology-enhanced services, and the development of future technology-enhanced services.

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## LIST OF ABBREVIATIONS

BPT	Behavioral Parent Training
ECBI	Eyberg Child Behavior Inventory
HNC	Helping the Noncompliant Child
TE-HNC	Technology-Enhanced Helping the Noncompliant Child
WAI-O	Working Alliance Inventory- Observer Form

## INTRODUCTION

Given trends to suggest that the vast majority of children do not receive evidence-based mental health care (75%) or prematurely drop out of treatment when they do (80%) researchers and clinicians alike are considering the promise of technology to better meet these growing mental healthcare needs (Ringel & Sturn, 2001; Jones, 2014; Ritterband et al., 2003). Indeed, preliminary evidence suggests promise, with efficacy demonstrated across a range of mental health problems and treatment outcomes (e.g., Gros et al., 2013; Musiat & Tarrier, 2013; Nelson & Duncan, 2015), including Disruptive Behavior Disorders (DBDs), which are among the most common reasons that children are referred for mental health services (e.g., Jones et al., 2014; Whalen, Liden, Ingersoll, Dallaire, & Liden, 2006). Moreover, a majority (72%) of frontline therapists report using adjunctive technology defined broadly (e.g., telephone, text messaging, videoconferencing, email) in some capacity during the course of treatment (Gershkovich, Herbert, Glassman, & Ibrahim, 2016); however, many therapists also express reservations about how technology influences the therapeutic process, particularly therapeutic alliance (Becker & Jensen-Doss, 2013; Gershkovich et al., 2016; Ramsey et al., 2014). Regardless of theoretical orientation, therapeutic alliance is considered to be a trusting, supportive, and collaborative relationship between the client and the therapist (Horvath & Bedi, 2002; Luborsky, 2000; Martin et al., 2000). Although conducted primarily in the adult literature (Elvins & Green, 2008; Martin et al., 2000; McLeod, 2011), alliance is generally thought to consist of three sub-factors that each uniquely contribute to therapeutic change (Horvath et al., 2011; Orlinsky, Ronnestad, Willutzki, 2004; McLeod, 2011): 1) the affective bond between therapist and client (i.e., the extent to which

a trusting, empathetic, and supportive relationship exists between client and therapist); 2) agreement on therapeutic tasks (i.e., the degree to which the therapist and client agree and engage in therapeutic tasks); and 3) shared goals (i.e., the extent that the client and therapist agree on the goals of treatment and are motivated to work towards these goals) (Bordin, 1979). Prior work suggests a small to medium effect (e.g.,  $r = .20 - .30$ ; e.g., Horvath & Bedi, 2002; Horvath et al., 2011; Martin et al., 2000; Norcross, 2002) of strong alliance on more positive treatment outcomes (e.g., symptom reduction, engagement in and compliance with treatment, treatment completion), an effect size that is commensurate with that of specific therapeutic techniques (Wampold, 2001; Luborsky, Singer, & Luborsky, 1975; Stiles, Shapiro, & Elliot, 1986).

In spite of the fact that technology-enhanced services are often explicitly posited to improve client engagement, participation, and connection to the intervention, each of which are also core to therapeutic alliance, alliance has rarely been investigated in the context of technology-enhanced interventions (Bickman, et al., 2004; Chu et al., 2005). This remains the case in spite of clinician concerns that technology may pose barriers to establishing alliance, including worries that technology will interfere with the sense of warmth and empathy, limit the flexible application of the principles of therapy and limit therapeutic style, and decrease accountability (e.g., Becker & Jensen-Doss, 2013; Gershkovich et al., 2016; Ramsey et al., 2014). Indeed, only 13% of clinicians interviewed perceived that they had the skills to establish alliance via technology (Sucala et al., 2013). Such concerns remain the case in spite of data to suggest that therapeutic alliance can be established in the delivery of remote, online mental health services, yielding comparable or even better alliance than face-to-face interventions (Andersson et al., 2012; Day & Schneider, 2002; Wrzesnien et al., 2011; Cook and Doyle, 2002).

Lopez (2015) explained such findings using social presence theory (Rettie, 2008), which suggests that feelings of closeness can form through potential (but not necessarily actual) communication, demonstrating that technology promoted feelings of closeness by allowing the therapist and client to remain connected between sessions without adding additional direct contact. That said, research on alliance has focused primarily on technology-based (i.e., standalone technology, such as Web-based programs and videoconferencing), rather than technology-enhanced (i.e., supportive adjuncts to traditional face-to-face treatment) interventions, which some work suggests may be more efficacious, particularly when they include more face-to-face involvement of the clinician (e.g., Comer, 2015; Jones, 2014; Mohr, Burns, Schueller, Clarke, & Klinkman, 2013).

Work that has been conducted on alliance in child therapy in general and technology-enhanced services in particular, however, is even more limited. First, research generally takes an “adevelopmental” (Cicchetti & Rogosch, 2002; p. 14), in which the conceptualization of alliance mirrors that of adult psychotherapy without consideration of the unique aspects of child and family therapy (Digiuseppe, Linscott, & Jilton, 1996; Elvins & Green, 2008; McLeod & Weisz, 2005). Second, the vast majority of the child alliance literature focuses on “personal alliance” or the bond aspect of alliance with far less attention to the other aspects of alliance, particularly goal alliance, which are also posited to be applicable to child therapy (e.g., Digiuseppe et al., 1996; Karver et al., 2006; McLeod, 2011). Third, the vast majority of studies on alliance in the child area have been conducted on non-evidence-based interventions (Kazdin, Whitely, & Marciano, 2006); yet, understanding the role of alliance in evidence-based treatments is increasingly important given recent policy changes, such as the American Affordable Care Act, mandating the use of and access to science-based interventions (Karlin et al., 2010; McHugh &

Barlow, 2010). Fourth, alliance has often been investigated at one time point and by a single-rater (usually the therapist), yielding a potentially biased assessment, which is particularly problematic given clinician concerns about technology, and one that fails to capture the development of alliance over the course treatment (e.g., Rees & Stone, 2005; McLeod & Weisz, 2005; Crits-Christoph, Gibbons, Hamilton, Ring-Kurtz, & Gallop, 2011). Fifth and finally, most of the therapeutic alliance literature has been conducted with predominantly Caucasian, middle income children and families who are less likely to engage in and more likely to dropout of treatment than low income families, who are also more likely to be racially and ethnically diverse (Karver et al., 2006).

Accordingly, this study aims to address these limitations by preliminarily examining the link between therapist alliance and technology-enhanced treatment outcomes in one population in particular, low income families of children with early onset (3 to 8 years old) Disruptive Behavior Disorders (DBDs; oppositional defiant disorder and conduct disorder). DBDs are one of the most common reasons for youth referral to treatment (e.g., Egger & Angold, 2006; Lundahl, Risser, & Lovejoy, 2006; Zisser & Eyberg, 2010); yet, less than 20% of youth in need of Behavioral Parent Training (BPT), the standard of care treatment, receive services and an additional third of families do not respond, trends that are even more pronounced for low-income families who are overrepresented in statistics for DBDs (Farahmand, Grant, Polo, Duffy, & DuBois, 2011; Kazdin, Holland, Crowley, & Breton, 1997). Un- or inadequately treated, early onset DBDs, however, predict a number of long-term negative outcomes (e.g., delinquency, antisocial behavior, and employment instability), which lead to high societal costs (e.g., Pelham, Foster, & Robb, 2007; Piquero, Farrington, Welsh, Tremblay, & Jennings, 2009; Scott, Knapp, Henderson, & Maughan, 2001). Therapeutic alliance, particularly the alliance between the

caregiver, who is the primary agent of change in BPT, and therapist, in turn, may be a critical component of enhanced treatment engagement and success (Forehand et al., 2013; Kazdin et al., 2006). Yet, the relatively small number of studies that have empirically investigated the impact of alliance on BPT outcomes have been mixed, with some suggesting that stronger alliance is associated with better treatment outcomes (Garcia & Weisz, 2002; Kazdin et al., 2005; Kazdin et al., 2006), others suggesting that there is no relation (Hawley & Weisz, 2005; Motta & Lynch, 1990), and two studies even find an inverse relationship (Hukkelberg & Ogden, 2013; Robbins, Turner, Alexander, & Perez, 2003). Of note, however, these studies tend to focus on one BPT program, *Parent Management Training-Oregon Model*, which targets a broader age range of children (ages 2-14) and, in turn, increasingly less of an emphasis on parent as the agent of change in therapy as children age. As such, this study aims to clarify the role of parent-therapist alliance in particular or preschool-and school-aged children in BPT, and to expand this line of research to investigate the role of technology (Hukkelberg & Ogden, 2013):

*First, this study aimed to replicate and extend the extant literature on the alliance-outcome relationship in BPT.* Specifically, it was predicted that parent-therapist alliance across treatment groups would be associated with therapeutic change, such that stronger parent-therapist alliance would be associated with a range of treatment outcomes, including treatment completion, attendance, and greater improvements in parenting practices and child behavior. Underlying this hypothesis is a relatively small body of research on BPT, alliance, and outcomes and a larger body of literature linking alliance and outcomes in the youth and adult psychotherapy. Moreover, given the inconsistent findings of the role of each component of alliance (i.e., bond, tasks, and goals) exploratory analyses examined the differential influence of each of these components on treatment outcomes. Given confirmatory factor analyses supporting

a three-factor model of alliance in BPT with one measure of alliance (i.e., the *Working Alliance Inventory, Short Form*; Hukkelberg & Ogden, 2015), it was expected that each component would be related to treatment outcomes.

In addition, *this study aimed to preliminarily address clinicians' concerns about the incorporation of technology into treatment, by assessing differences in alliance between the two treatment groups: standard Helping the Noncompliant Child (HNC; McMahon & Forehand, 2003) and technology-enhanced HNC (TE-HNC)*. It was hypothesized that parent-therapist alliance would differ between the standard HNC and technology-enhanced HNC groups, such that alliance would be stronger in the TE-HNC group relative the standard HNC group. While alliance includes multiple subcomponents (i.e., tasks, goals, bond), most hypotheses about technology and alliance focus on the bond aspect. Therefore, exploratory analyses also investigated group differences on each sub-factor of alliance. Additionally, exploratory analyses will examine the differences in alliance formation between the HNC and TE-HNC groups. Previous research suggested that parent-therapist alliance should grow linearly over the course of treatment with initial alliance ratings being lower than later in treatment (Hukkelberg & Ogden, 2013; Patterson & Chamberlain, 1994). While it was expected that a linear pattern of parent-therapist alliance would emerge in both groups, it was also expected that alliance would form more rapidly in the TE-HNC relative to the HNC group due to increased connection with the intervention and therapist (Lopez, 2015). Importantly, if these hypotheses are not supported, yet alliance is not significantly decremented in the TE-HNC group relative to the HNC group, this may preliminarily ease clinicians' concerns (although future research and replication is, of course, needed).

*The third and final aim of the current study was to further explore the relation between technology use and alliance.* Building on the between group hypotheses, a within group approach was used to explore the relationship between “between-session” use of technology and subsequent in-session alliance. Fundamental questions exist about therapeutic alliance in the technology-enhanced literature, including the predictors, mechanisms, and aspects of alliance that are most important. This study aimed to preliminarily identify characteristics of the relationship that may be influenced by technology use in the provision of services, as well as which technology components may serve to promote alliance.

To date, two competing hypotheses about therapeutic alliance in technology-enhanced interventions have emerged: 1) technology may erode the relationship between therapist-client and 2) technology may enhance the relationship between therapist-client. The TE-HNC smartphone components were developed to promote feelings of connection and engagement in the treatment. As such, it was predicted that higher levels of technology use between sessions would be associated with higher parent-therapist alliance in subsequent sessions. Additionally, the social presence theory and the technology literature more broadly suggest that different aspects of technology-enhanced interventions vary in degree of relational interactions (Lopez, 2015; Rettie, 2008). Therefore, while all components of TE-HNC were used remotely, some aspects of the smartphone application may better support alliance formation and maintenance. Specifically, aspects of TE-HNC that allowed for more immediate and direct interaction and feedback (e.g., videoconferencing) may have had more of an impact on alliance development and maintenance than less relational aspects of the technology (e.g., survey completion).



## METHOD

### **Overview**

As noted previously, the proposed hypotheses were examined by capitalizing on and extending pilot data comparing one BPT program, *Helping the Noncompliant Child* (HNC; McMahon & Forehand, 2003), to *Technology-Enhanced Helping the Noncompliant Child* (TE-HNC), which aimed to examine the extent to which technology improved engagement of low-income families in treatment (Jones et al., 2014). Families were included in the project if they met criteria for “low-income” (i.e., adjusted gross income did not exceed 150% of the federal poverty guidelines, which takes into account both income and number of residents in the home), they had a child in the 3- to 8-year-old age range (range for which HNC was developed and tested), and the child exhibited disruptive behaviors in the clinical range as evidenced by meeting or exceeding clinical cutoffs on the caregiver-report of the *Eyberg Child Behavior Inventory* (ECBI; Eyberg & Pincus, 1999) Severity or Intensity subscales. Exclusion criteria included: (a) child developmental or physical disability that precluded use of HNC skills; (b) caregiver current diagnosis of substance abuse/dependence, mood (severe), or psychotic disorder; and/or (c) family involvement with Department of Social Services related to abuse/ neglect.

### **Participants**

After obtaining Institutional Review Board approval, families in north central North Carolina (NC) were recruited via (a) advertisements targeting areas, work places, and retail

outlets with an overrepresentation of low-income families; (b) healthcare, social service, and other agencies that serve low-income families; (c) local schools; and (d) word-of-mouth. Of the 22 randomized families [HNC ( $n = 11$ ) or TE-HNC ( $n = 11$ )], three served as practice cases (HNC = 1; TE-HNC = 2), resulting in 19 enrolled families in the parent study. Given findings that alliance is linked to treatment retention and attendance (Kazdin et al., 2005), the full sample will be used in the current analyses related to these outcomes. The remainder of the primary analyses, however, will include only the 15 treatment completers (HNC = 8; TE-HNC = 7) with pre-and post-treatment data available.

Caregivers who completed treatment were 87% female, 33% married or in a long-term relationship, and on average 37 years old ( $SD = 8.81$ ). Caregivers were 40% racial/ethnic minorities. Twenty percent of caregivers were unemployed, 33% were employed part-time, and 47% were employed full time. Approximately half (53%) of youth were male ( $M = 5.67$  years old,  $SD = 1.72$ ), and youth were 60% racial/ethnic minority. There were no demographic differences between families that dropped out of treatment and treatment completers. All families who dropped out of the study notified project staff prior to discontinuing treatment and each cited a major health (e.g., organ transplant) or family (e.g., divorce) stressor necessitating dropout.

## **Procedure**

Interested families contacted project staff that conducted a brief phone screen to assess for key eligibility criteria (i.e., 3 to 8 y.o. child, externalizing problems, low income status, and coparent). If caregivers were phone screen eligible and interested, caregiver-child dyads were scheduled for a more extensive baseline assessment at the UNC Department of Psychology Community Research Center and Clinic to confirm eligibility criteria and to gather more detailed

information on the participating caregiver and child. Following the baseline assessment, if caregivers were eligible, each caregiver-child dyad was randomized to either the standard HNC or TE-HNC program, and informed consent was obtained from the caregiver for his/her and the child's participation. The procedures at post-assessment were similar to baseline assessment procedures with few exceptions (e.g., consent). Caregivers were compensated \$50 per assessment for their participation. In addition, children in the TE-HNC group received a \$100 safe return bonus when the smartphone was returned at the post-assessment.

*HNC and TE-HNC Program:*

Consistent with Hanf Model BPT programs (Reitman & McMahon, 2013), HNC (McMahon & Forehand, 2003) is a two-phase manualized program designed to teach effective child management strategies to caregivers of young children (3 to 8 years old) with clinically significant disruptive behaviors. Advancement to the subsequent skill or phase is dependent on caregivers meeting specific behavioral performance criteria for the prior skill and set of skills during structured play (i.e., Child's Game or Parent's Game), which is observed and coded by therapists at each session. On average, caregivers require 8 to 12 sessions, as well as daily home practice of skills (at least 15-minutes per day recommended), to meet mastery for all program skills (McMahon & Forehand, 2003).

Caregivers first learned to identify age-appropriate problematic and adaptive child behaviors. Then, the HNC program progressed in two phases: Differential Attention (Phase 1) and Compliance Training (Phase 2). Within each phase, a series of parenting skills was taught in a sequential manner. In Phase 1, the Differential Attention Phase, caregivers learned to increase the frequency and range of social attention to the child and to reduce the frequency of competing

verbal behavior. A primary goal of this phase was to break out of the coercive cycle of interaction between the caregiver and child by establishing a positive and mutually reinforcing relationship. In the context of the Child's Game, a child-directed caregiver-child activity, the caregivers are taught the following three skills: 1) to increase positive attention to the child; 2) to eliminate commands, questions, and criticism associated with inappropriate child behavior; and 3) to ignore minor inappropriate child behavior.

In Phase 2, Compliance Training, caregivers were taught the difference between unclear and clear instructions and how to give the clear instruction sequence when issuing commands to the child, as well as a non-physical punishment procedure, timeout, for occasions of child noncompliance. Phase 2 skills were taught within the context of the Parent's Game, a parent-directed parent-child activity. Progression to each new skill was determined by the use of specific behavioral criteria. Accordingly, the specific parenting skills built on each other, and behavioral criteria ensured that caregivers mastered one skill before proceeding to the next skill. Each skill was taught using the following procedures: explain the skill to the caregiver; model the skill; have the caregiver role play the skill with the therapist, who plays the role of the child; have the caregiver practice with the child and receive feedback from the therapist; provide the caregiver with handouts which review the skills; and assign the caregiver daily homework to practice the skills at home.

Families were scheduled to attend weekly sessions until they mastered the skills and child behavior problems declined. In addition, therapists conducted mid-week calls to check-in regarding skills practice, to reinforce caregivers' practice, and to problem solve any problems with practice or child behavior.

The proof-of-concept TE-HNC smartphone components were designed to complement the theory and treatment techniques of the HNC program and were created in conjunction with:

- 1) Researchers with expertise in providing BPT to underserved families;
- 2) A Clinician Advisory Panel (20% male; 20% racial minority) who practiced at least one BPT program;
- 3) An industry partner with experience in developing tailored and sustainable technological applications; and
- 4) Health economists with expertise in health care efficiency, effectiveness, and value.

Core smartphone-enhancements included:

- 1) *Midweek Videoconference* between therapists and caregivers regarding skills practice, including problem solving obstacles to progress (e.g., selecting an ideal time out location);
- 2) Caregiver completion and submission of a *Daily Survey* of skills practice and progress used by therapists to guide *Midweek Videoconferences* and weekly sessions;
- 3) Caregiver daily review of the relevant *Skills Videos* from the *Skills Video Series*, which included psychoeducation and modeling of BPT skills;
- 4) Caregiver *Weekly Video recording* of at least one home practice of skills for therapist review and feedback; and
- 5) Personalized *Text Message Reminders* from therapist to client regarding weekly sessions, *Midweek Videoconferences*, and home practice.

#### Therapist Training and Supervision

Therapists were Master's level graduate students and a post-doctoral research assistant. Training included didactic presentations and practice, one practice case per therapist, and clinical emergency protocols. Therapists participated in weekly supervision, which included reviewing and discussing videotaped sessions. Therapist fidelity to program materials for both programs was coded using the following procedures:

- 1) The critical material (e.g., rationale for program, explanation of a skill, practice of the skill with the child) to be covered in each session was delineated;
- 2) Trained coders watched video recordings of sessions; and
- 3) Coders indicated

whether or not each of the critical points was covered in the session. Over 50% of sessions were coded for fidelity by two coders, who achieved over 90% reliability, yielding an average fidelity rating 90%. Finally, therapists treated families in both arms of study.

## **Measures**

**Demographic information.** Caregivers completed a demographic measure that included questions about themselves (e.g., age, education, race), their child (e.g., child age, gender, race), and their families (e.g., household income).

**Parent-Therapist Alliance.** For consistency with the literature, alliance between therapists and caregivers, defined broadly in the current study, is referred to as parent-therapist alliance. Although not an original part of the pilot study data collection, the *Working Alliance Inventory-Observer Form; Revision- IV* (WAI-O; Darchuk et al., 2000; Raue et al., 1991) was used in the current study to assess parent-therapist alliance at several time points throughout treatment. The *Working Alliance Inventory* (WAI) was originally developed by Horvath and Greenberg (1989) and was adapted into an observational measure by Titchner and Hill (1989). Since the original WAI-O was created it has been revised several times, in order to improve measurement and variability in alliance scores. The current study used the latest version WAI-O, Revision IV, which included changes intended to increase variability in alliance scores by adapting the anchors and providing descriptions for each anchor (see Appendix A for the WAI-O manual and scoring sheet).

The WAI-O assesses the three primary dimensions of alliance, bond, tasks, and goals, with 12 items measuring each factor and the ability to sum across subscales to receive a total score (36 items). All items are rated on a 7-point Likert scale ranging from (i.e., 1 = *Very strong evidence against* to 7 = *Very strong evidence*). Examples from the task scale include “*There is*

*the perception that what the therapist and client are doing in therapy is unrelated to the client's current concerns*” and *“There is agreement about the steps taken to help improve the client's situation.”* The goal scale includes items, such as *“There is a need to clarify the purpose of the sessions”* and *“There is disagreement about the goals of the session.”* Finally, items on the bond scale include, *“There is a sense of discomfort in the relationship”* and *“There is good understanding between the client and therapist.”*

After much consideration, this coding system was selected for this study for several important reasons. First, the most recent meta-analysis of parent-therapist alliance (McLeod, 2011) suggests that this is one of two alliance measures that have been used in multiple studies investigating parent-therapist alliance ( $n = 4$ ). Relatedly, although only a small number of studies have examined technology and therapeutic alliance, the vast majority of these studies used a self-report (therapist or client report) version of the WAI to evaluate therapeutic alliance (Hanley, 2009). As such, it represents a methodological advancement and allows for more accurate comparisons across studies. Second, the reliability of the measure has been established across several studies, problem areas, and populations (e.g., externalizing and internalizing;  $\alpha = .93$ ), while other observational coding systems are designed for specific interventions and presenting problems (Elvins & Green, 2008; McLeod, 2011). Third, the WAI-O allows for further examination of the three primary dimensions of alliance, rather than the two (tasks and bond) that are emphasized by other coding systems (e.g., *Therapy Process Observational Coding System for Children- Alliance Scale*; McLeod & Weisz, 2005). Finally, the WAI-O was designed to increase variability and combat the potential ceiling effects that other coding systems have produced in the context of child therapy in general (Chu, Skriner, & Zandberg, 2014) and BPT in particular (Hukkelberg & Ogden, 2013).

A team of seven undergraduate (5) and graduate students (2) in the Psychology and Neuroscience department at UNC-Chapel Hill comprised the coding team for the current investigation. Prior to coding, the team attended training on the WAI-O coding system, observed three practice videos, and established interrater reliability of 82%. After coding each practice tape, the team met to discuss any discrepancies of two points or more.

Once initial reliability was established, two coders coded each therapy session and based ratings on the full therapy sessions, which on average were about an hour and a half ( $M = 97$  minutes;  $SD = 21.80$ ; Range 53-140 minutes). Tapes were randomly assigned to each coder, and each coder coded sessions across therapists, families, time points, and treatment groups, in order to decrease the potential for bias. Coders were also blinded to all study aims and hypotheses. Coders attended bi-monthly meetings to address any coder drift, discrepancies of more than two points, and issues related to coding (e.g., video quality). Each family received two scores at each time point on bond, tasks, and goals. These three scores were equally weighted and summed to receive a total alliance score. Each coder's ratings were averaged to yield one alliance score per session. Given the subjective nature of the scale, scores were averaged to create more reliable and stable ratings.

When available, four sessions were randomly selected for each family to represent early, middle, and late phases of treatment. Research suggests that assessing alliance on four or more occasions leads to a reliable assessment of the general status of alliance across treatment (Crits-Christoph et al., 2011). One treatment completer was missing video data and video was only available for the first two time points. Consistent with other longitudinal research on therapeutic alliance (Langer, McLeod, & Weisz, 2011), to sample different phases of the treatment, each case was divided into early, middle, and late phases. In order to control for Phase 1 and 2 of



HNC due to findings that alliance ratings may vary by phase of treatment (Patterson & Chamberlain, 1994), two sessions were randomly selected from Phase 1 of treatment and two sessions from Phase 2. When possible, first and last sessions were excluded from analyses; however, inclusion of the first sessions was necessary for one of the families that dropped out after the first session. On average, the four treatment dropouts completed two sessions and were enrolled in treatment for 3.75 weeks. As such, consistent with previous research on parent-therapist alliance (Kazdin et al., 2005), only one session was randomly selected from the available sessions to establish initial alliance ratings.

On average families completed 5 sessions during Phase 1 and 4 sessions during Phase 2. For the first time point or early therapy, on average the second session was coded for families (range sessions 2-4) and the skills being taught ranged from Attends to Rewards. At the second time point, the average coded session was the fifth session (range session 4-6). During the second time point, skills being taught included both Rewards and Ignoring. For time point 3, the average coded session was session 6, and coded sessions ranged from session 5 to 9. Finally, at time point 4, the average coded was the eighth session and sessions ranged from 6 to 10. For both time point 3 and 4, the skills being taught included both Phase II skills: Clear Instructions and Time Out.

**Treatment Outcomes.** Treatment outcomes were assessed across a broad range of outcomes and measures. With the exception of treatment completion ( $N = 19$ ), all other treatment outcomes were investigated in treatment completers only ( $N = 15$ ). Each outcome of interest is subsequently discussed:

*Treatment completion.* Treatment completion was assessed in the full sample ( $N = 19$ ). Families were classified as either treatment completers or dropouts based on their completion of the program.

*Treatment Efficiency.* Efficiency of treatment was measured by tracking the number of weeks (rather than number of sessions) required for each family to complete the mastery-based HNC program. In order to assess attendance consistency, weeks when the client canceled or did not show up for sessions were included in the total number of weeks.

*Changes in parenting style.* Changes in parenting style from baseline to post-treatment were measured with the positive parenting subscale (12 items) and negative/inconsistent parenting subscale (7 items) of the *Alabama Parenting Questionnaire* (APQ; Shelton, Frick, & Wootton, 1996). Parents rated items about different parenting habits (e.g. “*you threaten to punish your child then do not actually punish him/her*”) on a scale from 1 (*never*) to 5 (*always*). Previous studies have found the scale to have good internal consistency and validity, and one study resulted in a preschool revision of the APQ (Clerkin, Marks, Policaro, & Halperin, 2007; Essau, Sasagawa, Frick, 2006). The alpha for this positive parenting subscale was .64 and .62 for the negative/inconsistent parenting subscale.

*Caregiver skill acquisition.* Four behaviors were coded in Child’s Game: (1) Attends (positive attention in which the parent provides an ongoing verbal description of what the child is doing; e.g.: “you are stacking the blocks”), (2) Rewards (positive attention that is provided following the child’s appropriate behavior; e.g.: “Good job!,” “Thank you for picking up your toys!”), (3) Questions (an interrogation to which the only appropriate response is verbal), and (4) Instructions (command issued by the parent towards the child). Additionally, during Parent’s Game the number of Clear Instructions (clear, specific commands) issued were coded and tallied.

Five trained undergraduate coders at the University of Vermont assessed parenting behaviors from videotapes of parent-child interactions (i.e., the Child's Game and Parent's Game) from baseline and post-assessment. The coders received approximately 50 hours of training. Prior to beginning coding, coders reached agreement at 80% or higher with pre-coded tapes by experts.

Over half (54.5%) of the videos were double coded for fidelity. When two coders failed to reach 80% agreement, they met in person and jointly coded the observation, resolving outstanding discrepancies. This occurred in 27.3% of the observations (agreement prior to resolving discrepancies was 69%). When there was a discrepancy that had to be resolved, the resolved score was used in analyses, essentially representing 100% agreement. Otherwise, one observer was arbitrarily designated as the primary observer and this score was used in analyses. Changes in caregiver skill use from baseline to post-treatment were measured by using the established mastery-criteria reported by McMahon and Forehand (2003) for successful completion of Phase I and Phase II of HNC. That is, the number of Attends + Rewards per minute, Questions + Instructions per minute, and Clear Instructions per minute were calculated both at baseline and post-treatment.

*Change in Child Problem Behavior.* Pre- to post-treatment change in disruptive behavior was assessed using the *Eyberg Child Behavior Inventory* (ECBI), a 36-item inventory for 2 to 16 year olds (Eyberg & Pincus, 1999). The ECBI has two scales: 1) Intensity Scale, which measures the frequency (*1 = never to 7 = always*) with which the child engages in each of 36 behavioral problems (Range 36 to 252; > 131 clinically significant); and 2) Problem Scale, which asks caregivers to indicate whether each of the 36 behaviors is “a problem for you” (*yes or no*; Range 0 to 36; > 15 clinically significant). The ECBI is sensitive to BPT interventions (e.g., Eisenstadt, McElreath, McNeil, Newcomb, & Funderburk, 1993; Nixon, Sweeny, Erickson, &

Touyz, 2003; Webster-Stratton & Hammond, 1997) and has demonstrated internal consistency and test-retest reliability (Burns & Patterson, 1990; Eyberg & Robinson, 1983; Funderburk, Eyberg, Rich, & Behar, 2003; Robinson, Eyberg, & Ross, 1980). The alpha for the Intensity Scale was 0.85 and the Problem Scale was 0.76.

**Technology use.** Use was defined by dividing the actual use of each component by the number of opportunities for use to obtain an average score for each family per week:

*Daily Surveys* use was defined by the number of surveys completed between sessions, divided by the number of days between sessions throughout treatment. *Daily Surveys* asked questions about skill practice and were responsive to caregiver input (e.g., if caregiver said s/he practiced skills at home on a given day, the survey asked about the quality of practice).

*Skills Videos Series* use was defined by the number of times a caregiver reported watching *Skills Videos*, divided by the number of opportunities to watch *Skills Videos* throughout treatment. The *Skill Videos Series* included one approximately 3 minute video per each of 5 skills, which included psychoeducation, modeling, and reminders to practice.

Caregivers were instructed to video record one home practice per week. Therefore, *Video recording of Skills Practice use* was defined by assessing the proportion of videos recorded between sessions to the number of opportunities for video recording throughout treatment. Therapists watched the video recording in order to tailor feedback.

How often a caregiver completed the scheduled mid-week call divided by the number of opportunities to complete a call throughout treatment defined *Midweek Videoconference* use. As is typical of HNC mid-week calls, the videoconference was used to check-in regarding skill practice and progress; however, the smartphone allowed it to be face-to-face.

The final TE-HNC component, *Text Message Reminders* regarding sessions, *Midweek Videoconference* calls, and skills practice, was not included in these analyses, due to the inability to track whether or not caregivers received and read the reminders.

## RESULTS

Discussions regarding the incongruity between the rapid evolution in technology and the rigidity (i.e., a static intervention protocol) and timeline of RCTs (i.e., average 5.5 years), as well as the cost of technology-enhanced mental health services research, have led to calls for resource efficient methods and analytic approaches that optimize the richness of data (see Brown et al., 2009; Howe, Beach, & Brody, 2010; Kumar et al., 2013 for reviews). Accordingly, the current study includes tests of statistical significance; however, trends in the data, effect sizes, and graphical analyses are the focus of the results. Effect sizes, which are the primary focus of Aims 1 and 2, will be expressed using Cohen's (1988) conventions for correlational effect sizes (i.e., 0.1 = small, 0.3 = moderate, and 0.5 = large) and for conventions for Cohen's  $d$  (i.e., 0.2 = small, 0.5 = medium, and 0.8 = large). Graphical analyses, which are the primary focus of Aim 3, were conducted using Tableau, data visualization software that can interact with databases to generate graphs. Graphs were constructed using aggregate alliance ratings at each time point, as well as families' aggregate percentage of technology use between sessions and trends in patterns over the course of treatment were examined.

Table 1 presents descriptive statistics, including means and standard deviations for continuous variables, as well as frequencies and percentages for count variables, were conducted on sociodemographic and major study variables. A correlation matrix that includes all major study variables was also constructed to examine the relations among the variables considered in this study (see Table 2). Then, results corresponding to Aim 1 and Aim 2 of the study will be

presented. Finally, a case study for each of the seven TE-HNC completers will be presented with corresponding parallel graphs of each caregiver's technology use and alliance (see Figures 3-7), in order to explore trends between specific smartphone component use and alliance scores.

**Aim 1.** In order to examine this aim, a stable estimate of alliance was created for each family by aggregating all four-assessment points to form a single alliance score. Research suggests that the aggregation of four or more assessments of alliance produces a reliable measure of alliance and that aggregate alliance scores are more robust predictors of outcomes than single assessment points (Crits-Christoph et al., 2011; McLeod, 2011; Tichenor & Hill, 1989). These aggregate scores were carried forward into all of the Aim 1 analyses.

**Treatment Completion.** To test the first hypothesis that parent-therapist alliance would be lower in treatment dropouts than treatment completers, an independent samples *t*-test was conducted to compare the initial (first time point) alliance scores (bond, goal, tasks, and total) between completers and non-completers. Treatment group was not included in this analysis, because two participants dropped out from both the standard and technology-enhanced group. Comparisons of treatment completers (Total Alliance  $M = 195.25$ ;  $SD = 20.41$ ) and non-completers and comparisons revealed a small effect size (Cohen's *d*) (Total Alliance  $M = 197.50$ ;  $SD = 12.43$ ) ( $t(60) = .22$ ,  $p = \text{n.s.}$ ,  $d = .13$ ). Results suggest that initial parent-therapist alliance scores were unrelated to treatment completion.

**Treatment Efficiency.** In order to examine the second hypothesis that higher aggregate alliance across both the standard and technology-enhanced groups ( $N = 15$ ) would be associated with treatment efficiency, the correlations between weeks to complete treatment, number of session, and total alliance were calculated. Results suggest that there is a moderate negative

association between alliance and the number of sessions it took families to complete treatment,  $r = -0.44$ ,  $p = \text{n.s.}$ , such that alliance accounts for 19% of the variance in treatment length; however, the data did not support a link between alliance and weeks to complete treatment ( $r = -0.09$ ,  $p = \text{n.s.}$ ; 1% variance).

**Change in Parenting Behavior.** Two residualized change score regressions were conducted to investigate the link between total parent-therapist alliance and changes in positive and negative/inconsistent parenting. Contrary to hypotheses, trends in the data fail to suggest a link between parent-therapist alliance and post-treatment positive,  $F(2,12) = .64$ ,  $p = \text{n.s.}$ , or negative/inconsistent parenting,  $F(2,12) = .23$ ,  $p = \text{n.s.}$ , controlling for baseline positive and negative/inconsistent parenting. Using the  $R^2$  as an effect size indicator, total alliance accounted 10% of the variance in positive parenting and 3% of the variance in negative/inconsistent parenting above and beyond base the variance in post-assessment positive parent (10%) and negative parenting (3%) above and beyond baseline parenting.

Consistent with the small sample size, limited power, and the number of predictors in the residualized change score regression, a one predictor regression analysis was also conducted to examine the association between parent-therapist alliance and the change score in parenting from baseline to post-assessment. Although there appeared to be less of a relation between parent-therapist alliance and negative parenting on the APQ,  $F(1,13) = .02$ ,  $p = \text{n.s.}$  (<1% of variance), trends in positive parenting suggest alliance may have a more substantive association,  $F(1,13) = 2.64$ ,  $p = \text{n.s.}$  (17% of the variance in positive parenting change from pre- to post-treatment). Additionally, correlations were used to explore the relationship between the sub-factors of alliance (bond, task, goal) and changes in parenting from pre-to post-treatment. The correlation between bond ( $r = 0.45$ ,  $p = \text{n.s.}$ ) and task ( $r = 0.35$ ,  $p = \text{n.s.}$ ) alliance and positive parenting



reveal medium effect sizes, suggesting that the relationship quality between the therapist and caregiver explained 20% of the variance and therapist and caregiver agreement on the tasks in therapy explained 12% of the variance in the positive parenting. There was also a small correlation between goal alliance and positive parenting ( $r = .14, p = \text{n.s.}, 2\%$  variance). In regard to negative/inconsistent parenting, there were small negative effects of all sub-factors of alliance (i.e., bond:  $r = -0.06, p = \text{n.s.}, <1\%$  variance; task:  $r = -.05, p = \text{n.s.}, <1\%$  variance; and goal:  $r = -.27, p = \text{n.s.}, 7\%$  of the variance) on negative/inconsistent parenting.

**Skill Acquisition.** In order to test the hypothesis that total alliance would predict post-assessment HNC skill acquisition controlling for baseline skill use, residualized change score regression analyses were conducted for both Phase 1 (Attends + Rewards; Questions + Instructions) and Phase 2 (Clear Instructions) skills. Trends in the data fail to suggest a link between total alliance and post-treatment Phase 1 (Attends + Rewards/minute,  $F(2,12) = 1.50, p = \text{n.s.}$ ; Question + Instructions/minute,  $F(2,12) = 0.81, p = \text{n.s.}$ ) or Phase 2 skill use (Clear Instructions/minute,  $F(2,12) = 0.46, p = \text{n.s.}$ ) controlling for baseline skill use. Total alliance, however, accounted for 20% of the variance in Attends + Rewards/minute, 12% of the variance in Question + Instructions/minute, and 10% of the variance in Clear Instructions/minute controlling for baseline levels of all of these parenting skills.

Similar to parenting practices, several one-predictor regression analyses were conducted to examine the link between parent-therapist alliance and change in skill use from baseline to post-assessment (an indicator of skill acquisition). Again, results do not suggest a link between total alliance and changes in any of the Phase 1 skills (Attends + Rewards/ minute:  $F(1,13) = 2.19, p = \text{n.s.}$  or Question + Instructions/minute:  $F(1,13) = 3.85, p = \text{n.s.}$ ) or Phase 2 skills (Clear Instructions/minute:  $F(1,13) = .17, p = \text{n.s.}$ ); yet, total alliance accounted for 12% of the variance

in caregiver use of Attends and Rewards per minute, 23% of the change in caregiver use of Questions and Instructions, and 2% of the variance in caregiver use of Clear Instructions per minute.

Then, exploratory correlation analyses were run to examine the link between the subcomponents of alliance and caregivers' skill acquisition. Using Cohen's (1988) conventions for correlational effect sizes (i.e., 0.1 = small, 0.3 = moderate, and 0.5 = large), the correlations between bond alliance and Phase I skill acquisition suggest that a small to medium proportion of the variance in Phase I skill acquisition was accounted for by the bond component. Bond alliance accounted for 7% of the variance in Attends + Rewards ( $r = .27$ ,  $p = \text{n.s.}$ ) and 18% of the variance in Question + Instructions ( $r = -0.42$ ,  $p = \text{n.s.}$ ). Additionally, there was a small correlation between bond alliance and Phase 2 skills (Clear Instructions,  $r = -0.01$ ,  $p = \text{n.s.}$ , <1% of the variance). Results also reveal a small effect of goal alliance on both Phase 1 (Attends + Rewards,  $r = -0.08$ ,  $p = \text{n.s.}$ , 1% of the variance and Question + Instructions,  $r = -0.02$ ,  $p = \text{n.s.}$ , <1% of the variance) and Phase 2 (Clear Instructions,  $r = .19$ ,  $p = \text{n.s.}$ , 4% of the variance) skill acquisition. Finally, caregiver and therapist agreement on the tasks of treatment seemed to have a moderate-large effect of Phase 1 skill acquisition (i.e., Attends and Rewards ( $r = .44$ ,  $p = \text{n.s.}$ ) and a decrease in Questions and Instructions ( $r = -.51$ ,  $p = .05$ ), but a small effect on Phase 2 skill acquisition (Clear Instructions,  $r = -0.16$ ,  $p = \text{n.s.}$ , 3% of the variance). As such, task alliance accounted for 19% of the variance in Attends and Rewards change and approximately 26% of the variance in Questions and Instructions change.

**Child Behavior.** Similar to parenting, two residualized change score regressions analyses were used to explore the relationship between parent-therapist alliance and post-assessment caregiver-reported child problem behaviors controlling for baseline problem behaviors. Trends

suggest that parent-therapist alliance was not linked to post-assessment problem behaviors measured by either the Problem Scale,  $F(2,12) = .44, p = \text{n.s.}$ , or the Intensity Scale,  $F(2,12) = .08, p = \text{n.s.}$ , of the ECBI controlling for baseline ratings of problem behaviors. Total alliance accounted for 7% of the variance in post-assessment Problem Scale scores and 2% of the variance in post-assessment Intensity Scale scores above and beyond the variance explained by baseline problem behaviors. Results also suggest that total parent-therapist alliance was not linked with change scores in Problem,  $F(1,13) = .71, p = \text{n.s.}$ , or Intensity,  $F(1,13) = .16, p = \text{n.s.}$ , scores in a one predictor regression model. These results suggest that alliance accounted for 5% of the change in Problem Scale scores and 1% of the variance in Intensity Scale scores, respectively. These results suggest that there is a small effect of alliance on changes in child problem behaviors.

More exploratory analyses were conducted to assess the relation between each sub-factor of parent-therapist alliance and changes on the Problem and Intensity scores on the ECBI from pre- to post-treatment. Results reveal a small to medium of effect of the bond between the parent and therapist and the Problem ( $r = -0.31, p = \text{n.s.}$ , 10% of the variance) or Intensity ( $r = -0.15, p = \text{n.s.}$ , 2% of the variance) change scores. Also, there was small effect of the task component of alliance on both the Problem ( $r = -0.24, p = \text{n.s.}$ , 6% of the variance) or Intensity ( $r = -0.15, p = \text{n.s.}$ , 2% of the variance) change scores. Finally, there is small negative correlation between the goal component of alliance and Problem ( $r = -0.08, p = \text{n.s.}$ , 1% of the variance) and a medium negative correlation between with the Intensity ( $r = -0.30, p = \text{n.s.}$ , 9% of the variance).

***Aim 2.*** In order to examine the hypothesis that parent-therapist alliance would differ between the HNC and TE-HNC groups, such that alliance would be stronger in the TE-HNC group relative the standard HNC group, between-group effect sizes were calculated for aggregate

alliance and alliance at each of the four time points (see Table 3 for scores). First, trends suggest that alliance did not differ between the HNC ( $M = 198.96$ ,  $SD = 15.37$ ) and TE-HNC ( $M = 193.02$ ,  $SD = 15.27$ ), and the effect size was found to exceed to convention of a small effect ( $d = .2$ ),  $t(13) = .73$ ,  $p = \text{n.s.}$ ,  $d = .39$ .

Results also suggest that there were no differences in any of the sub-factor or total alliance scores between treatment groups at any of the time points (see Table 3). Given the small sample size and exploratory nature of the hypotheses, effect sizes were also examined. For the first time point, all subscale and composite scores were higher in the HNC group relative to the TE-HNC group. The effect sizes for these differences ranged from small ( $d = 0.16$  for bond) to large ( $d = 0.84$  for goal) effects, with the task and total effect sizes being in the medium effect range. At the second time point, alliance was higher for TE-HNC for all subscale and composite scores, with the exception of the bond component. The differences between the groups at this time point were all small effects ranging from  $d = 0.08$  to  $d = 0.34$  for the total and goal scores, respectively. For the third time point, all subscale and total scores were higher in the HNC group relative to the TE-HNC group. Effect sizes at this time point ranged from 0.72 (medium) to 0.84 (large) for goal and bond, respectively. Finally, at the final time point, all alliance scores were higher in the HNC group relative to the TE-HNC group. All effect sizes were in the small range ( $d = 0.15$ - $0.23$ ).

Additionally, Figure 1 displays the aggregate trajectories of total alliance for the HNC and TE-HNC groups, and Figure 2 depicts each family's individual variation around these trajectories. As depicted, there was more variability within groups than between groups, however, the aggregate patterns of growth appear to differ between the two groups. Across both groups alliance, on average trends upwards as therapy progresses. While both groups' alliance

peaks in mid-therapy, the TE-HNC group's mean alliance was more stable over time with fewer fluctuations in both the positive and negative direction, particularly during Phase 1 of treatment. Moreover, task and goal alliance increased the most for the TE-HNC group, while bond alliance increased the most for HNC in Phase 2 of treatment. During Phase 2, however, both groups increased between time points two and three and decreased between time points three and four across alliance components.

***Aim 3.*** A brief description of each of the TE-HNC families ( $n = 7$  treatment completers) is provided to illustrate the links between “between-session” technology use and subsequent parent-therapist alliance. These descriptions supplement Figures 3-7, which depict each families overall technology use, use of each smartphone component, and trajectories of parent-therapist alliance. Case studies include demographics and a description of baseline child presenting problems, caregiver's overall subjective ratings of the usefulness and convenience of the technology at post-treatment, as well as description of fluctuations in parent-therapist alliance relative to technology use.

#### *Case 1*

Case 1 was a four-year-old, Caucasian girl whose biological mother (age = 35, married) was the participating caregiver (see Table 1 for more demographic information). At baseline, the mother reported her daughter's disruptive behavior to be in the clinical range on both the ECBI Intensity Scale (Intensity score = 185; clinical cutoff = 131) and Problem Scale (Problem score = 28; clinical cutoff = 15). At post-assessment, this caregiver described the technology as being somewhat convenient and overall found the components to be extremely useful.

As depicted in Figure 3, this caregivers' overall therapeutic alliance (i.e., the total score) grew rapidly after the initial assessment and remained relatively high for the remainder of

treatment in comparison to the other families in the TE-HNC group (210.88 compared to 152.03). This general pattern of alliance was consistent across each aspect of alliance (i.e., bond, task, and goal). Similarly, this caregiver's technology use pattern was relatively consistent and high across treatment (i.e., 76% compared to 65%), particularly after the initial session.

Overall, this caregiver's pattern of technology use paralleled her alliance trajectory over the course of treatment. This trend seemed to be driven primarily by her completion of *Daily Surveys* (see Figure 4) and viewing of *Skills Videos* (see Figure 5), but not *Midweek Videoconference* completion (see Figure 6) or *Video Recording* home practice (see Figure 7). This caregiver's use of these weekly components (i.e., *Midweek Videoconference* and *Video Recording*), however, was high across treatment and may have also corresponded to the relatively stable and high alliance. Completion of the *Daily Surveys* seemed most closely linked with task and bond alliance trajectories (and to a lesser extent goal), while viewing *Skills Videos* were most closely paralleled task and goal alliance (and to a lesser extent bond).

## Case 2

Case 2 was a six-year-old, Caucasian boy whose biological mother (age = 34, divorced) was the participating caregiver. At baseline, the mother reported disruptive behaviors slightly above the clinical range on both the Intensity and Problem Scales of the ECBI (Intensity Score = 138; Problem score = 18). At post-assessment, this caregiver indicated that overall the smartphone technology was extremely convenient and useful.

This caregiver's pattern of alliance (i.e., total, bond, goal, and task) fluctuated over the course of treatment and seemed skill dependent; yet, was about equivalent to the rest of the TE-HNC families' total alliance (i.e., 191.38 compared to 193.29). Across all four smartphone components, the caregiver's average use of 58% was 11 percentage points lower than the other

TE-HNC participants' average (i.e., 69%). This caregiver's use of the smartphone enhancements varied to some extent within and between skills.

This caregiver's pattern of overall technology use generally seemed to correspond to the pattern of alliance. This trend of correspondence seemed to be most apparent for this caregiver's *Daily Survey* and *Midweek Videoconference* completion. There, however, did not seem to be any association between her *Skill Video* use (which was low and only occurred at one time point) and *Video Recording* home practice (which did not occur during Phase 1 of treatment). Similar to Case 1, this mother's *Daily Survey* completion was most closely linked to task and bond alliance, and seemed to be less related to the goal alliance trajectory. *Midweek Videoconferencing* completion also seemed to parallel bond and task alliance, but not goal alliance.

### *Case 3*

Case 3 was a six-year-old, Asian, Caucasian, and Native Hawaiian/Pacific Islander girl whose biological mother (age = 29, married) was the participating caregiver. At baseline, the mother reported that her daughter exhibited problem behaviors in the clinical range indicated by ECBI Intensity and Problem scores of 175 and 31, respectively. After treatment, this caregiver perceived the technology to be extremely convenient and extremely useful.

Total parent-therapist alliance was relatively stable throughout treatment and appeared to grow more rapidly at the beginning of treatment. Moreover, aggregate total alliance was relatively high compared to the other TE-HNC families (i.e., 202.50 compared to 191.44). There, however, was greater variability among different aspects of alliance relative to other TE-HNC families, with bond and goal alliance being more stable across treatment. In regard to technology use, this mother's overall average use was higher than the average of the other TE-HNC participants (93% compared to 63%).

Generally, this caregiver's patterns of technology use and alliance paralleled each other, particularly during early and mid-therapy. There, however, was some variability across smartphone and alliance components. For example, this mother's *Daily Survey* completion pattern paralleled goal alliance, but not task and bond. Additionally, viewing *Skills Videos* seemed most closely linked to task and goal alliance and did not seem to correspond with bond. Finally, *Midweek Videoconference* completion and *Video Recording* home practice seemed less linked to alliance. These components, however, were used regularly across treatment and may have contributed to the overall stability of alliance.

#### *Case 4*

Case 4 was a four-year-old, African American and Caucasian male, whose biological father (age = 31, married) was the participating caregiver. The father reported his son's problem behaviors to be below clinical range on the Intensity Scale (Intensity score = 128) and slightly above the clinical range on the Problem Scale (Problem score = 17). After treatment, this caregiver rated the overall convenience of the technology as somewhat convenient and useful.

Overall, this caregiver's alliance was relatively stable and low until late treatment when it increased rapidly. Aggregate alliance was lower than the other families in the TE-HNC group (i.e., 185.00 compared to 194.35), and there was variability across alliance components, such that goal alliance was more stable across treatment and bond and goal alliance had more fluctuations. Similarly, across all four of the smartphone components, this family used the smartphone technology below the other families' average (i.e., 49% compared to 70%).

This family's technology use and alliance trajectories seem to diverge. Indeed, a pattern seemed to emerge in which increases in technology use are concomitant to weaker alliance. This pattern appeared across all of the smartphone components and seemed to be more strongly linked



to task and bond alliance than goal alliance.

#### *Case 5*

Case 5 was a 7-year-old, Latino boy whose biological mother (age = 47, divorced) was the participating caregiver. At baseline, the mother rated her son's disruptive behavior problems in the clinical range on both scales of the ECBI (i.e., Intensity Score =149; Problem score = 21). This caregiver did not complete the post-assessment satisfaction survey, and, therefore, her reactions to the smartphone enhancements were not available.

Although this caregiver's aggregate total alliance was relatively high (i.e., 203.50 compared to 191.27) and grew rapidly after the initial assessment, alliance continued to fluctuate across skills. This pattern emerged across all aspects of alliance. This mother's overall use of the four smartphone components was below the average among other families (i.e., 40% compared to 72%) and varied to some extent within and between skills.

The overall pattern of technology use did not appear to correspond with this caregiver's total alliance trajectory. This caregiver most consistently completed the *Midweek Videoconference*, and the pattern of use did not seem to parallel alliance ratings. Also, the caregivers' use (or lack of use) of the other smartphone components did not seem linked to alliance ratings. It is possible that this caregivers' inconsistent pattern of technology use was linked to the relative instability of alliance across treatment or represents a general disengagement in treatment.

#### *Case 6*

Case 6 was a four-year-old, Latino boy whose biological mother (age = 32, divorced) was the participating caregiver. At baseline, the mother reported that her son exhibited disruptive

behavior below the clinical range on ECBI Intensity Scale (Intensity Score = 124), but above the clinical range on the Problem Scale (Problem score = 20). This caregiver's post-assessment ratings of the technology indicate she perceived the technology to be convenient and overall useful.

Taken together, this caregiver's total alliance trajectory was relatively stable, particularly in mid and late therapy. Despite the stability of total alliance, the trajectories of each aspect of alliance appeared to fluctuate over treatment, and the bond trajectory diverged from the task and goal alliance trajectories. Additionally, this family's aggregate total alliance was about equivalent to that of the other families in the TE-HNC group (i.e., 193.38 compared to 193.00). Regarding patterns of technology use, this family's overall technology use was above the other TE-HNC participants (i.e., 78% compared to 65%).

This family's pattern of total alliance appeared to correspond to technology use to some extent, particularly during early and mid-therapy, but not late therapy. This trend may be in part due to variability between the trajectories of the different aspects of alliance. For instance, this mother's completion of *Daily Surveys* and viewing *Skills Videos* paralleled both task and goal alliance, but not bond alliance. On the other hand, this caregiver's completion of the *Midweek Videoconference* and *Video Recording* home practice did not seem to correspond to any of the aspects of alliance.

#### *Case 7*

Case 7 was a 6-year-old, African American girl whose biological father (age = 37, married) was the participating caregiver. At baseline, the father reported that his daughter exhibited disruptive behaviors in slightly above the clinical range on both ECBI scales (Intensity

Score = 133; Problem score = 23). At post-assessment, this father indicated that he perceived the technology to be extremely convenient and somewhat useful.

This father's pattern of total, as well as bond, task, and goal alliance fluctuated over the course of treatment, and his aggregate total alliance was weaker relative to the other TE-HNC families (i.e., 164.50 compared to 197.77). Regarding smartphone component use, this family's overall technology use exceeded the use of other TE-HNC families (i.e., 75% compared to 66%).

This caregiver's overall pattern of technology use did not seem linked to their overall technology use. In regard to specific technology components, no correspondence was observed between *Daily Survey* completion, *Video Recording* home practice, *Midweek Videoconference* completion and any of the aspects of alliance. There, however, this father's viewing of *Skills Videos* seemed to parallel alliance, particularly task and goal alliance. This pattern was more robust during early and mid-therapy.

## DISCUSSION

Understanding how specific aspects of alliance are related to treatment outcomes, and how technology influences the therapeutic relationship may not only have the potential to facilitate the development of novel interventions, but also to inform how best to incorporate and implement technology-enhanced services with children and families. As such, the current study had three primary aims: 1) to replicate and extend the existing literature on parent-therapist alliance and BPT outcomes across both the standard and technology-enhanced group; 2) to examine differences in alliance between the standard and technology-enhanced groups; and 3) to preliminarily explore the link between technology use and alliance within the technology-enhanced group. Given the preliminary nature of this investigation and the focus on effect size and trends, rather than statistical significance, all findings should be interpreted and generalized with caution.

Overall, the pattern of findings from the current study on the link between parent-therapist alliance and treatment outcomes, are consistent the existing literature. That is, in recent meta-analyses examining the link between alliance and youth treatment outcomes, results suggest that parent-therapist alliance had a small to moderate effect ( $r = 0.11-0.19$ ) on treatment outcomes (Karver et al., 2006; Shirk & Karver, 2003; McLeod, 2011). Although across studies alliance seems moderately related to treatment outcomes, there is considerable variability within the broader literature (Garcia & Weisz, 2002; Kazdin et al., 2005; Kazdin et al., 2006), as well as the current investigation, such that certain aspects of alliance seem to be more consistently linked

to outcomes (i.e., task and bond) than others (i.e., goal) and alliance seems more strongly related to certain treatment outcomes (e.g., changes in parenting). As such, future research is needed to continue to clarify this link; yet, taken together, alliance may play an important role in therapeutic engagement and change or at least may be a marker of who is likely to benefit from BPT treatment (Kazdin et al., 2006). Alliance, however, is not the only factor leading to therapeutic change, and future research should investigate the combined effect of alliance and other specific therapy factors, as well as the additive and/or moderating effect of alliance, other nonspecific factors, and specific therapy techniques.

Contrary to study hypotheses, alliance was comparable between the two groups both at the aggregate level, as well as at each time point (i.e., early, middle, and late treatment). Importantly, this finding of comparable alliance, while consistent with the broader literature on technology-enhanced and based interventions (Cook & Doyle, 2002; Reynolds et al., 2006), extends the existing literature in which many of the analyses were conducted in studies where individuals self-selected into the technology group (e.g., Cook & Doyle, 2002; Reynolds et al., 2006). In the current study, families were randomly assigned to the technology or standard group, suggesting that even when clients were not expecting to engage in a technology-enhanced intervention, alliance could be established and maintained over the course of treatment at an equivalent level to the standard group. Moreover, the effect sizes of group differences for alliance were commensurate with previous research on the differences in alliance between face-to-face and online therapy (Cook & Doyle, 2002; Day & Schnieder, 2002). Importantly, previous research on TE-HNC demonstrates the cost effectiveness of the technology relative to face-to-face treatment alone. As such, TE-HNC can be considered a viable alternative that not only reduces the number of direct hours needed to effectively intervene (see Anton et al., 2016; Jones

et al., 2014 for a review), but does so without compromising the therapeutic relationship. This may help meet the growing mental health care needs and combat the long and well established workforce shortage. Although findings should be interpreted cautiously given the sample size, this finding, particularly in light of a growing body of evidence (e.g., Andersson et al., 2012; Wrzesien et al., 2011; Rabbit et al., 2016) should begin to ease clinicians' concerns that technology will negatively impact the therapeutic relationship.

Moreover, different patterns of alliance development seemed to emerge between the two groups (albeit with significant variability within each group). It is important to consider these patterns in light of relatively high alliance over the course of treatment for both groups, which is expected because of the collaborative and supportive nature of BPT treatment in general (Hukkelbery & Ogden, 2013). Consistent with previous research investigating patterns of alliance over the course of treatment (Stevens, Muran, Safran, Gorman, & Winston, 2007; Stiles et al., 2004), the TE-HNC group was characterized by moderate initial alliance, positive slope, relatively low variability, and early acceleration that slowed later in therapy. There are several potential explanations for this pattern of alliance. First, it is possible that the relatively low initial alliance can be attributed to early disappointment or concern about randomization into the TE-HNC group. Caregivers may have felt overwhelmed by the technology, particularly at the time that this study was completed given the relative novelty of smartphone technology. Then, it is possible that the relatively rapid early acceleration of alliance was associated with improvements in understanding the tasks and goal of treatment related to increased opportunities for skill modeling and communication between sessions, which is consistent with the relatively rapid increase in task and goal alliance in the TE-HNC group.

On the other hand, HNC's alliance growth was more consistent with a "rupture-repair" pattern, in which alliance is characterized by a series of spikes and dips (Kivlinghan & Shaughnessy, 2000; Stevens et al., 2007). Unlike the TE-HNC group, alliance remained relatively stable and moderate for the first half of treatment and grew rapidly during mid-treatment before coming back down to about the same level as the TE-HNC group. This pattern may represent what Patterson and Chamberlain's (1994) described as the "struggle –and-work-through" hypothesis of alliance in BPT, in which caregivers are resistant at the beginning of treatment to the midpoint and increase in the later-half of treatment once they have experienced some success and have a better understanding of the purpose of treatment.

While these findings are preliminary and replication is needed, these different patterns of alliance may have important implications for improving treatment. The technology components may help overcome caregiver's initial resistance, characteristic of BPT treatment, by helping caregivers understand the potential utility of the skills and overarching goal of treatment earlier in the therapeutic process. This may be particularly important for low-income families who are most vulnerable to dropout earlier in treatment. Alliance, albeit not statistically significantly different between the two groups, was lower in the TE-HNC group relative to the HNC group at the first observation. Therefore, researchers and therapists should also consider the potential detrimental influence of technology on alliance early in treatment. Therapists using technology in the provision of services may need to provide a thorough rationale and explain potential added benefits of the increased complexities, time, and effort involved in the using technology to clients up front.

Although the mean alliance trajectory for the TE-HNC group was more stable relative to the HNC group, there was variability within the TE-HNC group. In fact, it seems that technology

use may be related to this within group variability, such that caregivers that more consistently used the technology not only had fewer fluctuations in total alliance across treatment, but also less variability across sub-factors of alliance. In further examining trends within the TE-HNC group, “between-session” technology use and subsequent alliance, at least for some families, seemed to correspond. For these families, in general, higher technology use seemed to correspond with stronger aggregate alliance.

Additionally, several smartphone component specific trends emerged. First, daily smartphone components (i.e., *Daily Surveys* and *Skills Videos*) seemed to be more closely linked to alliance than weekly components (i.e., *Midweek Videoconference* and *Video Recording* home practice). These trends were to some extent unexpected. It was predicted that the technology use would most closely parallel bond alliance by promoting connection with the therapist between sessions. Indeed, technology use more generally and use of the daily components seemed more linked to task and goal alliance than bond alliance. Although it would be remiss to assume that these weekly components in general and technology use more broadly do not influence alliance, particularly bond alliance without further research, it is possible that weekly connection is not enough to foster feelings of connection that generalize to common conceptions of alliance. Future research with larger samples should investigate the optimal dose of technology use with more systematic methodologies, such as dismantling studies or newer Sequential Multiple Assignment Randomized Trial (SMART) designs (Danaher & Seeley, 2009).

While it was unexpected that the *Daily Survey* completion and viewing *Skills Videos* would be linked to alliance, interesting patterns emerged. Completion of *Daily Surveys* seemed to be linked to all sub-factors of alliance, but this pattern seemed to differ to some extent across families. Viewing *Skills Videos*, however, consistently appeared to be linked more closely with



task and goal alliance, but not bond. Interestingly, it seems that caregiver's perceptions of the usefulness of these technology components seemed to differentiate these trends. For instance, some caregivers, when asked about the usefulness of survey completion, cited accountability and the idea of not letting the therapist down (e.g., "The surveys held me accountable. I always answered them honestly and felt bad when I didn't/couldn't find time for Child's Game."). For these families, *Daily Survey* completion paralleled bond and task alliance. These caregivers may have perceived this component more relationally in that the surveys connected them to the clinician and helped the therapist know what was happening between sessions. Additionally, these caregivers also indicated that surveys helped them engage with the tasks of therapy and, in turn, survey completion may enhance agreement on and understanding of therapeutic tasks. On the other hand, some caregivers seemed to view surveys as a self-monitoring tool (e.g., "It helped me to see at the end of the day how many skills that I was using."). For these families, *Daily Survey* completion seemed more closely linked with task and goal alliance. Viewing the surveys as a personal tool, rather than a connection tool may be linked to feelings that the goals and tasks of therapy were meaningful and worthwhile. Similarly, caregivers generally cited that the videos helped with skill generalization and consolidation (e.g., "They helped to remind me of things I was told during the meetings but maybe forgot. Sometimes I would see something I did not see before or it would just make everything click."). As such, viewing *Skills Videos* may have enhanced understanding of the skills being taught and how these skills could be used to improve their child's behavior, and, in turn, led to agreement of tasks and goals. Therefore, caregivers' perceptions of the technology may be an important moderator of the relationship between technology use and alliance. Researchers, developers, and clinicians should be clear about the intended function of components of technology and communicate these clearly to

clients in order to maximize the potential of technology. It is, however, important for future research to consider the potential bidirectional (or predictive) relationship of alliance on technology use and replication of these findings is necessary.

It is important to note and consider that these patterns did not emerge for all families. In fact, for one family (Case 4), there seems to be an inverse relationship between alliance and technology use, such that increased technology use seemed to correspond with weaker alliance, particularly bond and task alliance. Of note, this caregiver found the technology to be the least useful of the of TE-HNC families and indicated that the certain aspects of technology was burdensome. As such, technology use without perceived usefulness may hinder alliance development. This trend begs for future research to elucidate for whom technology use is helpful, and, also, for whom it may be harmful.

Relatedly, specific characteristics that differentiate families whose technology use and alliance seemed to correspond and those who it did not (or did to a lesser extent) are important to consider. In general, trends appeared to be more prominent earlier in treatment, for families of children with more severe baseline problem behaviors, and for caregivers who had overall more positive feelings about convenience and usefulness of the technology. In regard to this pattern seeming to be more consistent in early and mid-treatment, it is possible that after caregivers learn what to expect from treatment and treatment gains stabilize, established alliance (either strong or weak) is less influenced by technology. Additionally, families with children exhibiting fewer behavior problems at baseline may have felt that the added treatment components may not have been necessary (e.g., the perceived costs of technology use did not outweigh the perceived benefits). There has been much discussion in the intervention literature more generally (Foster, 2003; Hansen, Lambert, & Forman, 2002) and technology-enhanced literature more specifically

about the appropriate dose-response relationship (Baumeister, Reichler, Munzinger, & Lin, 2014; Rabbit et al., 2016). Again, future studies should consider a potential stepped-care approach to incorporating technology into services where treatment options range from technology only to group based treatment to individual treatment to individual treatment enhanced with technology.

The results of this study must be considered in the context of its limitations. First, while not necessarily considered a limitation, the results of this study may not generalize to child interventions that require less contact between the caregiver and the therapist. In addition, low incomes families were the focus of this study because they are the most underserved in mental health services, and both alliance and smartphone-enhancements may be particularly important to increasing engagement; yet, findings should be generalized to higher income groups and other technologies with some caution. Furthermore, the sample size precluded more nuanced statistical models that include lagged effects (e.g., the interrelationship between alliance, technology use, and treatment outcomes), significance testing, and, in turn, definitive conclusions regarding causality or directionality. Finally, although sessions were intentionally selected randomly from Phase 1 and Phase 2 of treatment, the structure of HNC made it such that there was less consistency in skills across the Phase1 time points (i.e., time point 2 included three different skills). It is possible that alliance is skill dependent, such that some skills, regardless of time point, elicit higher or lower alliance ratings. While this should not have influenced the between group ratings, because skills were randomized across conditions, future research on BPT and alliance should consider measuring alliance across all of the skills or using sessions of the same skills across all families.

Despite these limitations, this study had a number of strengths. First, characteristics of this sample, including the focus on DBDs, one of the most common referral issues for children,

help enhance the generalizability of the small, albeit growing, literature on alliance in technology-based and enhanced interventions. Second, the vast majority of studies have looked at alliance in the context of adult interventions. Given that the findings of this study are commensurate with that existing literature, it is possible that technology, regardless of type of treatment modality or intended population, may not decrement alliance. Relatedly, while many of the existing studies on alliance and technology have used convenience samples where clients have self-selected into the technology intervention (Cook et al., 2002; Reynolds et al., 2006), this study employed random assignment enhancing the rigor of the investigation and extending the existing literature. Fourth, direct observation of interactions between the therapist and caregiver expand the current body of literature on alliance in the context of both child therapy generally (Kazdin & Whitley, 2005) and the technology-enhanced services in particular. This helps diversify assessment of alliance and adds to our understanding of potential biases in previous work on alliance, technology, and treatment outcomes. To this point, McLeod (2011) posits that much of the existing literature on alliance in the context of child therapy overestimates the effect of alliance on outcomes due to shared method variance. In fact, in previous research using observer-report of alliance has led to weaker effects of alliance on treatment outcome than self-report (McLeod, 2011). Therefore, the effect sizes commensurate with the existing literature demonstrated in the current investigation with a small sample size and use of measurement less susceptible to bias may be particularly impressive (Kazdin et al., 2006). Finally and perhaps most importantly, the current investigation capitalized on the benefits of graphical analyses, which, while limited in their capacity to detect statistical significance, prioritize clinical significance and begin answer calls to adapt our analytic techniques in the literature on psychological science more broadly (Hubbard & Lindsay, 2008; Lambdin, 2012) and

technology-enhanced interventions more specifically, including calls to move towards more person-oriented and graphical analyses that allow us to identify patterns and relationships (Clough & Casey, 2015; Dallery, Cassidy, & Raiff, 2013). These analyses, as seen in the current study, allow for simultaneous assessment of timing of intervention effects, variability within and between conditions, emerging trends, and potential processes (Manolov, Solanas, Sierra, & Evans, 2011). Because technology-enhanced interventions are still in a relatively nascent stage, visual analytic approaches may be particularly important, because they may not only inform how and what about the intervention seems to be working, but also for whom. These are questions that need answers in order to guide future development and use of these tools.

This study offers an important first step in understanding the impact of technology on the therapeutic process and how this relates more broadly to therapeutic change. Taken together, these findings suggest that parent-therapist alliance, similar to research on alliance more broadly, has a small to moderate effect on a range of BPT treatment outcomes. Future research should continue to investigate how alliance manifests in the context of child psychotherapy and if it differs based on presenting problem. The vast majority of research has been conducted in the context of internalizing disorders and observational systems were developed for these presenting problems and from concepts developed in the adult literature. Research, however, suggests that developmental perspectives to interventions important and this could be true for alliance, as well. Additionally, as is true of most studies of alliance, this study was not designed to assess the causal relationship between alliance and treatment outcomes or technology use on alliance. Therefore, it is possible that there is a bidirectional relationship or treatment improvements could drive positive alliance development. Future research with larger sample sizes should consider extending the current investigation by examining the interactive, longitudinal effects of

technology use, alliance, and treatment outcomes to better understand how these processes influence one another.

This study also preliminary identifies smartphone components that seem more linked to parent-therapist alliance, and suggests that technology use. Understanding which child, caregiver, and therapist factors influence alliance formation is an important next step in the child literature in general (McLeod, 2011), and gaining a better understanding of how technology may moderate or mediate this relationship will help us understand how to use technology more effectively to promote alliance development. Finally, studies of alliance in the context of technology-enhanced and based interventions have relied solely measures designed to assess alliance in traditional face-to-face therapy. These measures, however, may be missing aspects of the therapeutic relationship that are unique to the experiences of technology interventions (Chu et al., 2004; Wresien et al., 2013). To date, the focus on alliance and the development of technology-enhanced interventions has been on trying to find ways to create a “telepresence” or a sense of social presence and connection in the absence of face-to-face interaction (Tu & McIsaac, 2002). Although telepresence is important, future research should also focus on the unique capabilities of technology to capitalize on the untapped potential of technology to facilitate the relationship between the therapist and the client and agreement on tasks and goals of therapy.

Table 1. *Demographic and Behavioral Measures of Sample at Pre-assessment (n = 19).*

<i>Measure</i>	TE-HNC (n =9)			HNC (n=10)		
	<i>%</i>	<i>M</i>	<i>SD</i>	<i>%</i>	<i>M</i>	<i>SD</i>
<b>Child Demographics</b>						
Age (Years)		5.52	1.14		5.84	1.95
Gender (% Male)	44.40			50.00		
Ethnicity/Race (% Minority)	45.50			50.00		
<b>Caregiver Demographics</b>						
Age (Years)		35.30	6.54		36.40	10.68
Gender (% Female)	88.90			90.00		
Ethnicity/Race (% Minority)	22.20			40.00		
<b>Marital Status</b>						
Single	11.10			20.00		
Married/common-law	44.40			50.00		
Divorced/separated	44.40			30.00		
<b>Education</b>						
Less than high school	11.10			10.00		
High school/GED	--			10.00		
Some College	22.20			50.00		
College	33.30			10.00		
Advanced Degree	33.30			20.00		
<b>Employment Status</b>						
Unemployed	22.20			30.00		
Part-time	44.40			30.00		
Full-time	33.30			40.00		
<b>Parent-Therapist Alliance</b>						
Total Alliance		193.02	15.27		197.81	14.60
Bond		64.71	6.28		66.63	4.24
Goal		64.20	4.80		81.31	43.85
Task		64.05	4.62		65.54	5.55
<b>Child Behavior</b>						
<b>ECBI</b>						
Intensity		156.89	26.42		139.69	27.69
Problem		23.67	5.70		22.30	5.81
<b>Caregiver Behavior</b>						
<b>APQ</b>						
Positive Parenting		49.00	6.95		50.88	4.22
Negative/Inconsistent Parenting		15.00	3.21		15.25	3.54
<b>Skill Acquisition</b>						
Attends + Rewards/Minute		1.08	1.11		0.45	0.32
Questions + Instructions/Minute		4.11	1.83		3.25	1.74
Clear Instructions/Minute		0.75	0.66		0.58	0.42

*Note.* There were no significant differences between groups on all of the above-mentioned variables using *t*-tests or  $\chi^2$ .

Table 2. *Descriptive Statistics and Correlations Among Main Study Variables.*

Variables	1	2	3	4	5	6	7	8	9
1 Total Alliance	--	0.92**	0.97**	0.97**	0.37	0.29	-0.2	0.05	-0.08
2 Bond Alliance		--	0.05	0.88**	0.43	0.45	-0.06	0.15	0.31
3 Goal Alliance			--	-0.01	0.27	0.14	-0.26	0.30	0.08
4 Task Alliance				--	0.38	0.35	-0.05	0.15	0.24
5 Technology Use					--	0.39	-0.89*	0.06	0.49
6 Positive Parenting						--	-0.20	0.35	-0.17
7 Negative Parenting							--	0.41	0.30
8 ECBI Intensity								--	0.84**
9 ECBI Problem									--

Notes. \* $p < .05$ , \*\* $p < .01$



Table 3. *Sample Means and T-test Comparisons Between HNC and TE-HNC (n =15).*

<i>WAI-O Scale</i>	Sample Means			<i>t<sup>a</sup></i>	<i>p</i>	<i>d</i>
	HNC ( <i>N</i> = 8)	TE-HNC ( <i>N</i> = 7)				
<i>Time Point 1</i>						
Task	63.69	60.93		1.06	0.31	0.56
Bond	64.75	63.86		0.30	0.77	0.16
Goal	63.94	60.71		1.56	0.14	0.84
Composite	192.31	185.71		0.94	0.36	0.50
<i>Time Point 2</i>						
Task	63.00	64.21		0.28	0.78	0.14
Bond	65.50	63.57		0.58	0.57	0.30
Goal	63.19	65.86		0.67	0.51	0.34
Composite	191.86	193.64		0.17	0.86	0.08
<i>Time Point 3</i>						
Task	71.43	66.71		1.53	0.15	0.82
Bond	71.21	66.29		1.50	0.16	0.84
Goal	70.21	66.63		1.35	0.20	0.72
Composite	212.86	199.36		1.52	0.16	0.81
<i>Time Point 4</i>						
Task	65.79	64.36		0.28	0.79	0.15
Bond	66.64	65.14		0.35	0.73	0.19
Goal	65.93	63.86		0.43	0.68	0.23
Composite	198.36	193.35		0.37	0.72	0.21
<i>Aggregate Alliance</i>	198.96	193.02		0.73	0.48	0.39

<sup>a</sup>*df*=13.

Figure 1. Parent-Therapist Alliance by Treatment Group Over the Course of Treatment

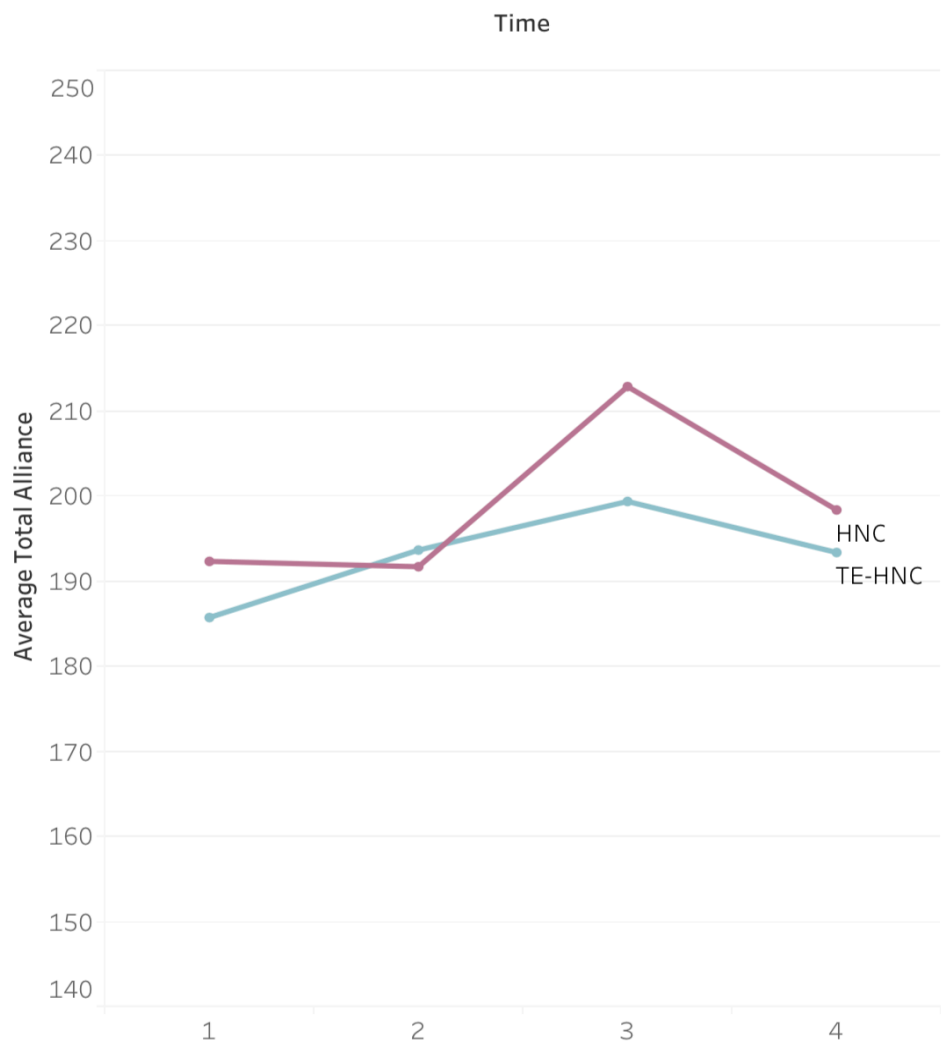


Figure 2. Individual case variability around the mean group trajectories

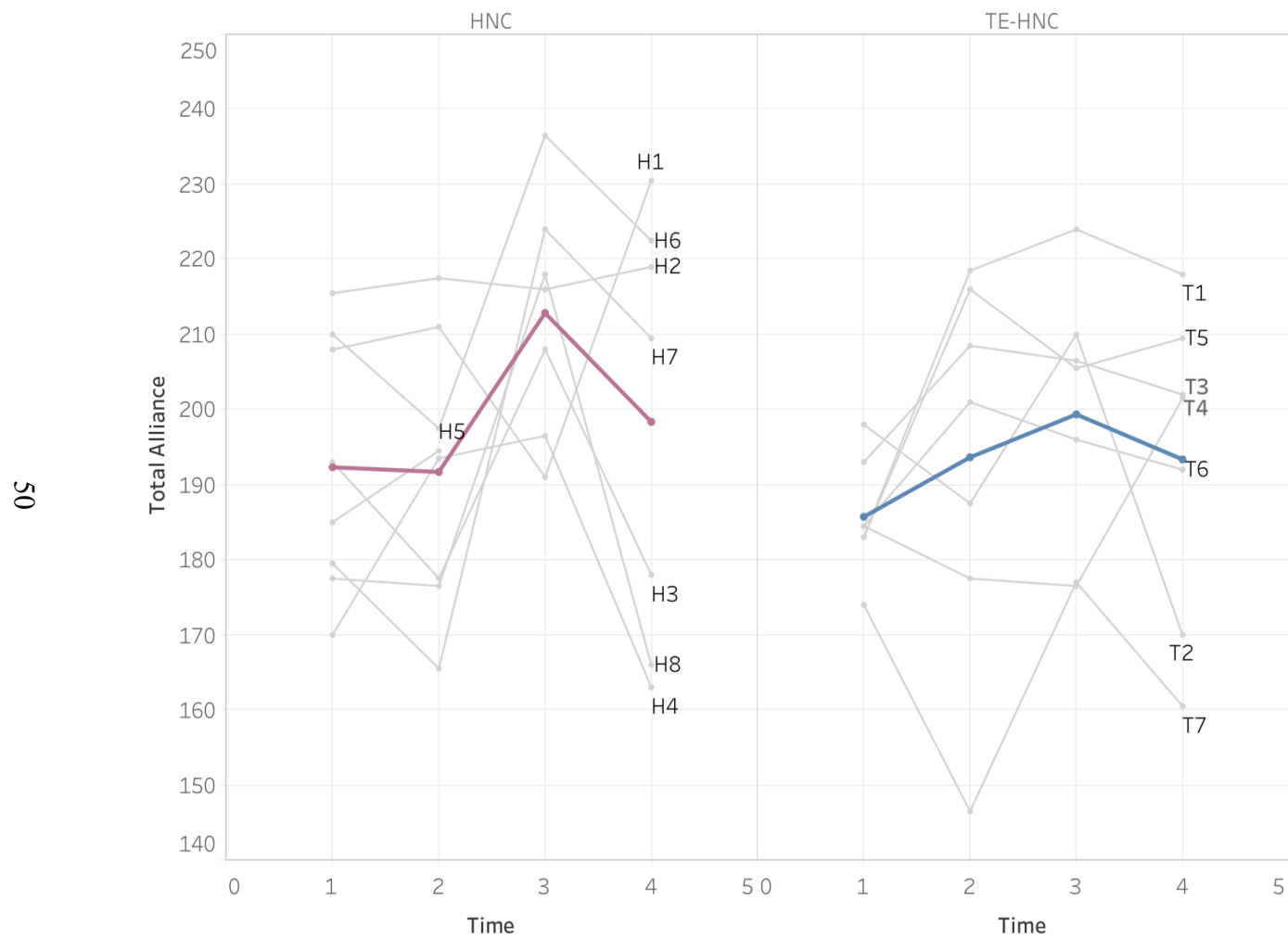


Figure 3. TE-HNC families total therapeutic alliance and overall technology use

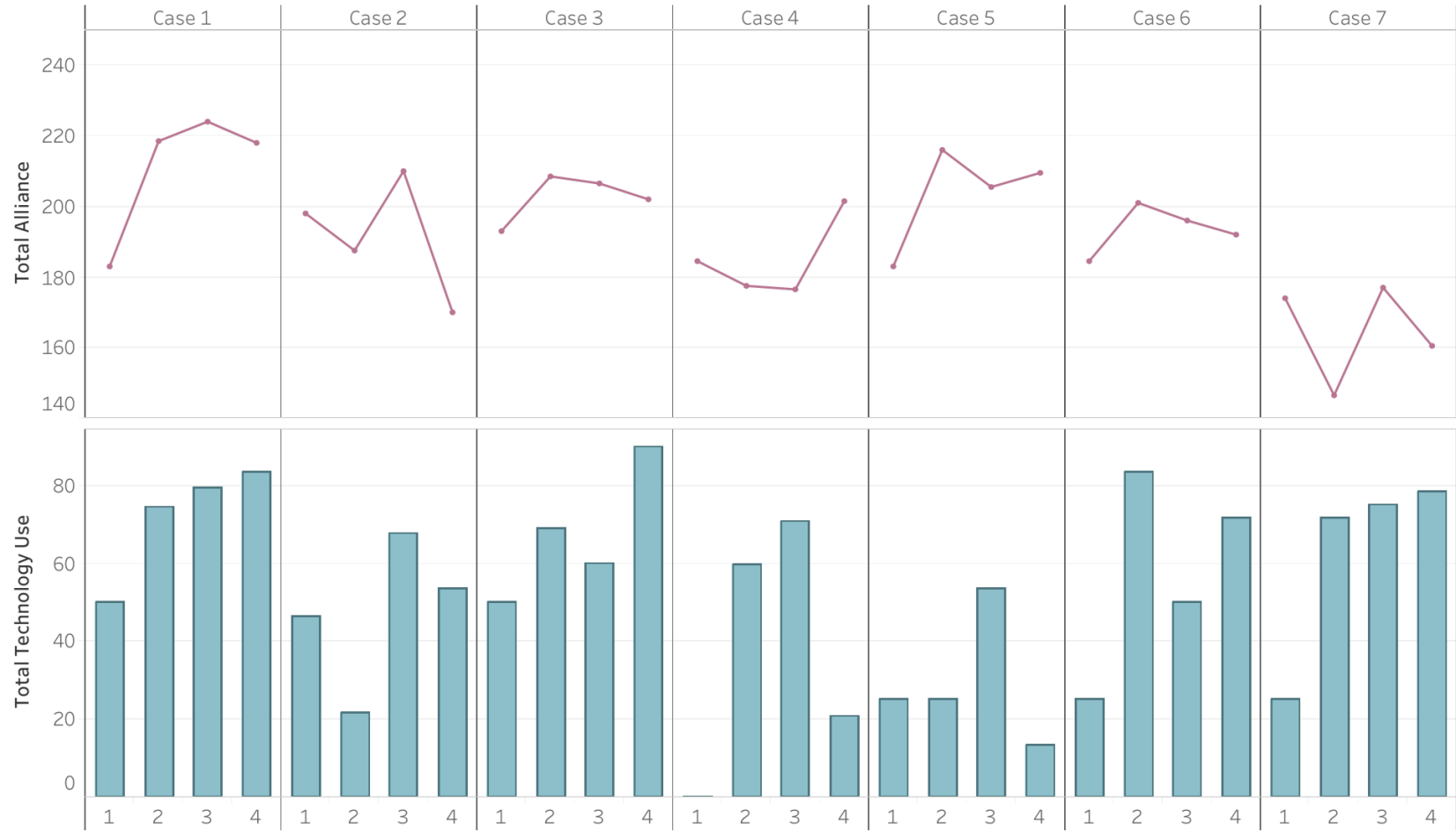


Figure 4. Daily Survey Completion and Bond, Task, and Goal Alliance



Figure 5. Skills Videos Viewed and Bond, Task, and Goal Alliance



Figure 6. Midweek Videoconference and Bond, Task, and Goal Alliance



Figure 7. Video Recording Home Practice and Bond, Task, and Goal Alliance





APPENDIX A: MANUAL FOR THE WORKING ALLIANCE INVENTORY-OBSERVER  
FORM (WAI-O): REVISION IV

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These guidelines rely greatly on the original guidelines set forth by Raue and colleagues (1997b), but we also made some significant additions and departures from those guidelines. One change is a departure from Horvath's (1982) original rating procedure as well as Raue and colleagues' (1997) guidelines. Typically, observers are to assume a good alliance and therefore subtract from the rating when evidence is present. Research has indicated that the WAI-O has relatively little variability in ratings (Raue, Goldfried, & Barkham, 1997). In addition, they noted that the mean score of all sessions observed was 6.04 out of a total possible score of 7, which is indicative of an ideal alliance. It can be argued that a restricted range of scores due to a possible ceiling effect may be a significant hindrance to the validity of the WAI-O. Our guidelines assume an average alliance between client and therapist, and thus ratings for all items have a starting point at "4-No Evidence," the middle point of the scale.

To accommodate this change, the anchor labels used by the current WAI-O (i.e., "Never" to "Always") were changed to reflect the amount of evidence present in the segment observed (i.e., 1 = "Very strong evidence against", 7 = "Very strong evidence"). By adjusting the anchor labels and the starting point for each item, we believe that raters can more accurately observe the alliance because they will look for positive and negative aspects of the alliance.

To develop a balanced scale that incorporates evidence for and against the factor in question, it appeared necessary to anchor the extreme scores of the scale with bipolar adjectives relevant to each item. For example, the item "There is a mutual liking between the client and therapist" calls for "open dislike" at a rating of 1 and "overt statements of liking" for a rating of 7 (pp. 4-5, Attached). Using this format, discussion of the extent or severity of the opposing adjectives is included at each point in the scale.

With this in mind, we developed descriptions for each of the points on the scale for each item. These descriptions include behavioral indicators present at each level, as well as descriptions of the extent or severity of the item in question.

The resulting guidelines provide a thorough explanation of the relevant factors in each item, and provide conceptual boundaries between the items. By using the middle point of the scale as a starting point and focusing on the severity of opposing adjectives, raters are provided with clear

distinctions between the points on the scale, which may allow raters to more reliably detect subtle changes in the alliance. Although these guidelines are designed to give observers a more thorough understanding of what is meant by each item, we feel that we have left considerable room for subjective perceptions of the alliance. In this respect, both overt behavioral observations and observers' impressions can be accounted for in the final rating of each item.

These guidelines have only recently been completed, and they must be empirically examined before any of the above claims can be supported. Specifically, studies comparing the construct validity, interrater reliability, and scale intercorrelations of the WAI-O when scored with and without these guidelines should be conducted. In addition, the efficiency of using this rather lengthy manual must be evaluated. Currently, we are in collaboration with the original developer of the WAI in order to ascertain the construct validity of these guidelines.

1	2	3	4	5	6	7
Very strong evidence against	Considerable evidence against	Some evidence against	No evidence	Some evidence evidence	Considerable evidence	Very strong evidence

### **1. There is a sense of discomfort in the relationship.**

1 = Participants appear extremely comfortable in the session. The client approaches difficult topics very openly. The client and/or therapist may comment on how comfortable or relaxed the other is. Behavioral cues such as relaxed posture and smooth voice are evident.

2 = Client shows no apprehension toward topics in therapy. The client seems to approach and explore topics without hesitation, is not defensive, and appears to be relaxed during most of the session. Behavioral cues suggest that the client is comfortable.

3 = Client discusses difficult topics with limited hesitancy, and appears to be relaxed (e.g., relaxed posture, little fidgeting, smooth speaking). The client may become hesitant during parts of the session, but the therapist and client work through it appropriately.

4 = No evidence or equal evidence regarding client comfort and/or discomfort.

5 = Client is fidgety (only near the beginning of the session) and is generally hesitant to discuss deeply personal topics in the session. The client appears to be unwilling to explore some specific content areas. The therapist may also show some physical signs of discomfort (e.g., fidgeting, shaky voice, frequent posture changes) toward the beginning of the session.

6 = Client and/or therapist show(s) physical signs of discomfort in the session. The client does not appear to become more comfortable as the session progresses and/or may seem defensive throughout. Communication between the client and therapist may seem forced or uneasy.

7 = Client seems uncomfortable throughout the session. The client appears extremely defensive and actively avoids difficult topics. Client may even state on multiple occasions that he/she is uncomfortable.

### **2. There is agreement about the steps taken to help improve the client's situation.**

1 = Client directly states that tasks and goals are not appropriate, and does not generally agree on homework or in-session tasks. The client argues with the therapist over the steps that should be taken. The client refuses to participate in the tasks.

2 = Client is hesitant to explore and does not follow therapist guidance. The client withdraws

from the therapist and appears to merely “go through the motions”, without being engaged or attentive to the therapist or the task.

3 = The client appears to be unsure as to how the tasks pertain to his/her goals, even after some clarification by the therapist. The client seems either ambivalent or unenthusiastic about the tasks in therapy, and is passively resistant to the tasks (e.g., limited participation).

4 = No evidence or equal evidence regarding agreement and/or disagreement.

5 = Client follows exploration willingly with few or no therapist clarifications needed. The client becomes invested in the process, and is an active participant in the task. There is a sense that both parties have an implicit understanding of the rationale behind the tasks in therapy.

6 = Client openly agrees on tasks and is enthusiastic about participating in tasks.

Both participants are acutely aware of the purpose of the tasks and how the tasks will benefit the client. To this end, the client uses the task to address relevant concerns and issues.

7 = Repeated communication of approval and agreement, both before and after the task is completed. The client responds enthusiastically to interventions, gains insight, and appears extremely confident that the task and goal are appropriate.

### **3. There is concern about the outcome of the sessions.**

1 = Client expresses satisfaction with progress. Participants evaluate progress positively and agree on how in-session tasks will facilitate client change.

2 = Client works with therapist toward setting goals and evaluating progress. The client seems satisfied and excited with goals and progress. The client may make comments about how information learned in therapy is used during his/her daily life.

3 = Client makes no comments about concern and appears to understand the goals of therapy. Participants seem satisfied with the rate of progress of therapy. The therapist and the client discuss concerns they may have and adjust the therapy to remedy such concerns.

4 = No evidence or equal evidence regarding concern and/or satisfaction.

5 = Client expresses concern early in the session, but not in the latter parts of the session. The client may express doubt regarding the benefits of therapy, and may also appear hesitant to engage in session tasks.

6 = Client expresses concern throughout the session, especially towards the end. Attempts to redefine goals or how they are evaluated are generally unsuccessful.

The client leaves the session dissatisfied with the amount of progress of therapy.

7 = Client states throughout the session that he/she is worried about the progress of therapy. The client has consistently low expectations for achieving long-term change. As a result, the client may not be very active as a participant. The client is convinced that therapy will not be beneficial for him/her.

### **4. There is agreement about the usefulness of the current activity in therapy (i.e., the client is seeing new ways to look at his/her problem).**

1 = Participants repeatedly argue over the task. The client refuses to participate in the task, claiming that it is of no use to his/her goals. There is tension between the therapist and the client, and issues are not explored.

2 = Client does not engage or invest in the task of the session, though he/she may not openly dispute the usefulness of the task. The client fails to explore issues with openness.

3 = Client is hesitant to participate, but eventually becomes invested in the task. The therapist is able to accurately convey the rationale behind the activity so that the client is then able to understand how the task is relevant to his/her current concerns.

4 = No evidence or equal evidence regarding agreement and/or disagreement.

5 = Client does not question the usefulness of the task and engages in the task almost immediately.

6 = Participants engage in a meaningful task that addresses a primary concern of the client. The client may remark, "I never thought of that before" or something to this effect.

7 = Participants remark how important/useful the task is. There is openness to exploration of the task and enthusiastic collaboration between the participants.

## **5. There is good understanding between the client and therapist.**

1 = There is consistent need for clarification of ideas. The therapist makes inaccurate reflections and/or interpretations most of the time. The client becomes outwardly irritated or annoyed by the miscommunication. The tone of the therapist is very cold and mechanical. The therapist does not express warmth toward the client.

2 = Therapist makes several inaccurate reflections, and the client must correct them and ask for clarification at several points in the session. The client appears to become mildly agitated as a result of the miscommunication.

3 = Therapist makes a few poor reflections. Occasionally, the therapist has a mechanical tone of voice. The client may ask for clarification of ideas on a few occasions.

4 = No evidence or equal evidence regarding good and/or poor understanding.

5 = Therapist is generally warm toward the client. There are few/no inaccurate reflections by the therapist. The client answers the therapist's inquiries without much confusion. Understanding improves over the course of the session.

6 = Participants generally have efficient and warm communication with each other.

The therapist makes accurate reflections during the session.

7 = Therapist makes consistently empathic, insightful, and accurate reflections throughout the session. The client rarely/never asks for clarification. The client may comment that the therapist truly understands him/her.

## **6. There is a shared perception of the client's goals in therapy.**

1 = Therapist makes consistent mistaken interpretations of the client's needs. The client does not see how tasks are relevant to progress. The therapist is rigid, and arguments may result.

2 = Therapist makes several inaccurate interpretations of client's needs. The client is required to reiterate his/her perceptions on a couple of occasions. The therapist eventually adapts, but only after the client makes several corrections.

3 = There is some uncertainty in the dyad about the goals and steps taken, including minor confusion about the client's needs. The client must make corrections and the therapist adapts after relatively few corrections.

4 = No evidence or equal evidence regarding shared and/or differing perceptions.

5 = Therapist understands the needs of the client after relatively few clarifications and/or corrections by the client. Underlying logic for tasks is understood and the client appears to be relatively invested in the therapy process.

6 = In addition to the shared perception of the client's needs, the participants work together on choosing and completing in-session tasks. Both participants see how the tasks are related to the client's goals and are able to evaluate progress.

7 = Consistent and accurate iteration of client's goals from both participants. The participants have a clear understanding of the steps required for the achievement of goals. The therapist explores problems enough to understand their details (e.g., the life situations where the client's problems are most profound).

### **7. There is a sense of confusion between the client and therapist about what they are doing in therapy.**

1 = Therapist makes accurate reflections and/or interpretations. Goals are clear and effectively communicated, as are the steps needed to accomplish goals. The participants work actively and enthusiastically on in-session tasks.

2 = Therapist makes accurate reflections most of the time, and the client agrees with therapist reflections. Goals are not directly communicated, but the participants are implicitly aware of the nature of the goals.

3 = Client makes no comments about goals, but has an unspoken understanding of the goals of therapy. There is little or no need for clarification of tasks and goals.

4 = No evidence or equal evidence regarding confusion and/or understanding.

5 = Client is not invested in the in-session tasks. The client is hesitant to participate because he/she does not understand the relevance of the task. Therapist clarification of the tasks is often needed.

6 = Client does not see the relevance of the tasks or the goals and exhibits signs of impatience and irritation toward the therapist. The client is extremely hesitant to engage in tasks because the client feels that the goals do not address the client's concerns. There may be some dialogue between the participants as to whether the goals are relevant.

7 = Client openly questions the point of therapy. The therapist makes inaccurate judgments of the client's immediate and long-term concerns. Goals are not clearly defined, and the tasks do not match the client's areas of concern.

### **8. There is a mutual liking between the client and therapist.**

1 = There is open dislike between the participants. Overt hostility is apparent. Arguing and disparaging comments may be present. Neither participant displays concern for the other, and there is a noticeable coldness between them.

2 = Therapist fails to show concern for the client. This may be reflected in the therapist's forgetting of important details of the client's life. The client may question whether the therapist disapproves of him/her.

3 = Although not verbalized, there appear to be stresses in the relationship between the participants. In particular, the therapist rarely/never reacts warmly toward the client, nor does the therapist reinforce healthy outside behaviors very often. The relationship seems relatively cold and mechanical.

4 = No evidence or equal evidence regarding mutual liking and/or disliking.

5 = Participants react with warmth toward each other for most of the session. The therapist is actively involved in exploration of emotions and is aware of important details of the client's life.

The therapist's tone is empathic and encouraging for the most part.

6 = Participants react warmly toward each other throughout the session. The therapist encourages healthy behavior and continually expresses what seems to be genuine concern for the client.

7 = Therapist appears genuinely interested in the client's life, including hobbies and other outside interests. The therapist constantly reinforces positive behavior and displays positive regard for the client consistently during the session. The client may state "I really feel like you care about me" or something to that effect.

## **9. There is a need to clarify the purpose of the sessions.**

1 = Session tasks are clearly stated. There is collaboration in setting the tasks and verbal agreement about the tasks. Both participants are thoroughly aware of the purpose of the tasks, and there is a clear understanding of where the task should lead the participants.

2 = The participants implicitly agree upon the tasks in the session. Participants seem to collaborate within each in-session task, and the client appears to feel that the tasks are helpful and important.

3 = Clarification of the purpose of in-session tasks is rarely needed. Clarification may be needed early in the session, but the participants clearly communicate expectations/wishes for the session, and the participants actively work together on the tasks.

4 = No evidence or equal evidence regarding the need to clarify session purpose.

5 = Clarification is needed at several points in the session. It appears as though the client does not understand where the task is going or how it is relevant to his/her present condition. The therapist must make several attempts to clarify throughout the session.

6 = The session seems to meander, with no clear purpose or task. Topics may be touched upon only briefly, and may change without clear transition. The client may appear to be misguided in the exploration of topics.

7 = The tasks of the session are never discussed, and are clearly not understood by the participants. The therapist and/or the client may attempt to change the topic without transition. The participants may have differing views of the appropriate tasks for therapy. Communication is laborious and unclear throughout the session. The client may ask, "How will this help?" or something to that effect.

## **10. There is disagreement about the goals of the session.**

1 = Participants work successfully through agreed-upon in-session goals. There is no evidence of disagreement. Goals are appropriate and meet client's needs.

2 = Participants work toward similar in-session goals with which they both seem satisfied.

3 = Participants work toward agreed-upon in-session goals. Some questions may arise, but the therapist is able to be flexible when necessary and may alter the session to meet the client's needs. Goals may initially be irrelevant but are quickly adjusted for the client.

4 = No evidence or equal evidence regarding disagreement and/or agreement.

5 = Client and/or therapist voice one or two concerns regarding appropriateness of in-session goals. Some time may be spent in discussing different viewpoints on goals before a conclusion is reached. The participants may have some difficulty agreeing with one another about concerns.

6 = Client and/or therapist question the point of several goals. Clarification may be necessary at many points during the session. The client may express agreement in order to appease the

therapist, but he/she may not actually concur with the therapist – commonly known as the “yes, but” situation.

7 = Participants are in total disagreement over goals, or goals are inappropriate for the client. The client may be resistant to in-session tasks that relate to the goals.

### **11. There is a perception that the time spent in therapy is not spent efficiently.**

1 = Participants work well together. The client seems open to all subjects, focuses on the task at hand with little to no redirection by the therapist, and clear progress is made.

2 = Client works at discussing all subjects, focuses well, and makes general progress. There may be some hesitancy or resistance on the part of the client, even though client is trying his/her best.

3 = Client attempts to discuss most subjects, but may need redirection from therapist. Slow progress is made.

4 = No evidence or equal evidence regarding time efficiency and/or inefficiency.

5 = Client has trouble discussing a few topics, and also may require redirection. The client’s trouble with the task at hand may be obvious, and the participants seem to have trouble complementing one another’s roles.

6 = Client avoids several topics and has trouble focusing. Little progress is made. The participants’ attempts to improve the situation are mostly unsuccessful. The session gives the impression that there is a lack of focus; participants seem to be meandering from topic to topic, without clear direction or commitment to a plan.

7 = Client continually avoids or resists subjects. Focus is often redirected by the therapist, and no productive gains are made. The participants do not work well together.

### **12. There are doubts or a lack of understanding about what participants are trying to accomplish in therapy.**

1 = Participants are clearly working successfully towards the same identifiable goals.

Relevance of long-term goals are apparent to both participants. They may discuss goals in order to praise the therapeutic process or comment on its usefulness.

2 = Participants discuss long-term goals, agree, and work on them. Little discussion is needed on this topic, but concerns are immediately addressed and therapy session is adjusted to meet the needs of the client.

3 = Participants may not make mention of long-term goals, but seem to be working toward the same objective. The client seems happy with progress that is made.

4 = No evidence or equal evidence regarding confusion and/or understanding.

5 = Participants may have minor disagreements on long-term goals. Specific tasks may be questioned or resisted. The client may voice a general dissatisfaction.

6 = Participants may need to pause several times to adjust long-term goals. Therapy is interrupted, and several interventions may be questioned. The therapist may assume an “expert” role, and thus may discount the client’s ideas for therapy.

The client may become despondent and withdraw emotionally from therapy.

7 = Participants identify different goals, question each other’s priorities for therapy, and are unable to compromise on a solution. The client may state his/her reason for attending therapy that evokes a negative response from the therapist. The client may also express strong displeasure for in-session goals as they might relate to long-term goals.

### **13. There is agreement about what client's responsibilities are in therapy.**

1 = Participants do not agree on what the client's responsibilities are in therapy. The client may refuse the therapist's direction, verbally disagree about homework, and seems reluctant to participate.

2 = Client has clear trouble accepting what the therapist wants him/her to do. The client may challenge or disregard the direction provided by the therapist, and may complain about a number of homework issues.

3 = Client seems reluctant about therapist's ideas. The therapist may attempt to be directive, but the client may not understand or accept the direction. The therapist may expend a lot of effort to encourage client participation.

4 = No evidence or equal evidence regarding agreement and/or disagreement.

5 = Client may have some hesitation but largely agrees with the therapist. The client offers little resistance to the therapist's ideas, and the session improves as time progresses. The client may also appear to be overcompliant, perhaps in order to avoid confrontation.

6 = Client generally acquiesces to therapist's suggestions, and is relatively enthusiastic about participating. For instance, the therapist may make a suggestion to the client that the client will acknowledge, but not seem excited about.

7 = Client is eager and willing to do what the therapist suggests in session and as homework. The client may also comment on the usefulness or how well the session appears to be going.

### **14. There is a mutual perception that the goals of the sessions are important for the client.**

1 = Client indicates that goals are unimportant and irrelevant. As a result, the participants seem uninterested in the therapeutic process.

2 = Client and/or therapist are having trouble staying interested in the therapeutic process. The majority of the goals may seem irrelevant or unimportant to the client. The client may give indications of dissatisfaction by voicing these concerns, or by detaching his or her self from the session.

3 = Client and/or therapist may seem slightly uninterested in the therapeutic process. The client may indicate that some goals do not seem relevant and may question their importance.

4 = No evidence or equal evidence regarding mutual perception of importance and/or unimportance of goals.

5 = Participants seem to understand importance of goals. Little may be said on the subject, but there is a general air of understanding, and effort is put into therapy.

6 = Participants are actively involved in therapy. The client feels that the goals are generally important and beneficial. The participants focus well during therapy, but may be occasionally interrupted by the client's questions.

7 = Participants are focused and bring energy to the therapeutic process. The client feels that the goals are important and extremely relevant.

### **15. There is the perception that what the therapist and client are doing in therapy is unrelated to the client's current concerns.**

1 = Therapist is able to recognize relevant topics and/or concerns that may be voiced by the client, and is able to incorporate all concerns into session plan in a helpful and efficient manner.



2 = Therapist acknowledges client's relevant concerns, and tries to address them within the session. The session is flexible and the therapist can usually return to the previous topic if needed without trouble.

3 = Therapist acknowledges relevant concerns and topics brought up by client, but may have some trouble working them into the session plan. The therapist may seem a bit reluctant to deviate from the current topic.

4 = No evidence or equal evidence regarding amount of relation to client concerns.

5 = Client brings up some topics or concerns during therapy that the therapist overlooks. The therapist manages, however, to address most of the topics.

Therapy does not flow smoothly and the therapist may have trouble getting back on track.

6 = Client brings up concerns during therapy that the therapist hears but may or may not address. Attempts to address the issues are usually unsuccessful. The session may seem choppy and the concerns are treated as interruptions.

7 = Client voices relevant problems with current therapy. The therapist may or may not acknowledge these concerns, and is unable to deviate from therapy plan to address client concerns. The therapist may seem annoyed by client's attempts to interrupt the session plan.

#### **16. There is agreement that what the client and therapist are doing in therapy will help the client to accomplish the changes he/she wants.**

1 = Participants express strong doubt and/or dissatisfaction. The participants state different goals and are unable to come to an agreement.

2 = Client and/or therapist express doubt and/or dissatisfaction several times.

Participants seem unable to resolve several key issues involving therapy.

3 = Client and/or therapist express some doubt or dissatisfaction about the therapeutic process. They may have some trouble coming to an agreement that is satisfactory to both participants. There may be no complaints, but some conversations may seem superficial and/or lacking exploration.

4 = No evidence or equal evidence regarding agreement and/or disagreement.

5 = Client and/or therapist seem happy with therapy, although there may seem to be room for improvement. No doubts are expressed by either participant.

6 = Client and/or therapist agree therapy is helping. Participants seem to be making significant progress toward goals.

7 = Participants agree that therapy is very beneficial. The client may comment on several occasions about how helpful therapy has been.

#### **17. The client is aware that the therapist is genuinely concerned for his/her welfare.**

1 = No concern is shown in therapy. The therapist is non-attentive, cold, and statements are hostile and/or inappropriate. The client does not feel genuine concern from the therapist.

2 = Client feels little concern from the therapist. The therapist may give a few statements of concern, but mostly acts in a mechanical and uncaring fashion, despite repeated attempts for responses from the client.

3 = Client feels like therapist is listening, but does not care. The therapist may pay attention, but only give some signs of emotion in response to the client.

4 = No evidence or equal evidence regarding therapist concern and/or disinterest.

- 5 = Client feels some concern from the therapist. The therapist is mostly attentive, shows some warmth using reflection, and may give a few statements of concern.
- 6 = Client feels like therapist is concerned and invested in the therapy. The therapist is attentive and warm, demonstrates empathetic listening, and offers statements of concern.
- 7 = Client is confident that the therapist is genuinely concerned. The therapist is attentive, shows empathy using a variety of techniques, delivers statements in a warm and caring manner, and uses direct statements of concern.

### **18. There is clarity about what the therapist wants the client to do.**

- 1 = Client and therapist both lack clarity. The therapist is unable to communicate clearly, and as a result of this, the client is unable to understand what the therapist wants. There is a very poor connection between participants.
- 2 = The session involves a lot of misunderstandings between participants. For example, role responsibilities may not be clearly delineated, or tasks may not be adequately defined.
- 3 = The session involves some confusion on the part of the client. The therapist gives explanations that are somewhat clear, but the client doesn't understand some of it.
- 4 = No evidence or equal evidence regarding clarity and/or confusion.
- 5 = The client is able to understand some of the session, even though the therapist's explanations are confusing or misleading on several subjects. The client exerts extra effort in order to understand what the therapist is asking him/her to do.
- 6 = Only some confusion is experienced during the session. The client is able to understand the therapist even though some of the therapist's explanations are unclear. In general, the session flows smoothly.
- 7 = Participants are able to communicate in a clear and thorough manner. There is little to no confusion experienced within the session. There is a good connection between the participants.

### **19. The client and the therapist respect each other.**

- 1 = Participants show a great amount of dislike, disdain, and/or spite for each other.
- 2 = Participants show some disregard for each other, or one of the participants demonstrates a great amount of dislike, disdain, and/or spite for the other. One or both consistently interrupt and/or demonstrate a lack of effort in trying to understand the other, which could be exhibited by negative nonverbal behaviors including closed posture, and wandering eyes. The therapist could end the session abruptly, without regard to the client's state.
- 3 = Participant actions include one or more of the following at times: interrupting each other, employing derogatory/supercilious statements or mechanical reflections, and/or not paying attention. This may cause an inaccurate therapist reflection and/ or the need to ask the client to repeat some content, or induce a client tendency to dismiss therapist ideas or persuasiveness.
- 4 = No evidence or equal evidence regarding respect and/or disrespect.
- 5 = Participants show some evidence that they are really paying attention to each other. The therapist may exhibit some notable acceptance of client problems.
- 6 = Participants show frequent signs that they are really paying attention to each other throughout the session, such as by nodding or other minimal encouragers, insightful reflections by the therapist, and active participation by the client.
- 7 = Strong evidence that participants consistently and completely attend to the other's

communications throughout the entire session. The client voices strong confidence in the therapist's competence in some way. The therapist voices some note of encouragement that indicates respect for what the client is trying to do.

**20. The client feels that the therapist is not totally honest about his/her feelings toward her/him.**

1 = Client feels that the therapist is being completely honest toward him/her. The client may verbally acknowledge trust of therapist.

2 = Client is comfortable in disclosing intimate issues as a result of knowing the therapist's feelings towards him/her.

3 = Client shows some implicit satisfaction towards therapist response to interpersonal questions about feelings towards the client.

4 = No evidence or equal evidence regarding client feelings of therapist honesty and/or dishonesty.

5 = Client shows some implicit hesitancy in disclosing intimate details. The therapist may show some impatience in dealing with the client, and there may be some evidence that the client senses this.

6 = Client demonstrates hesitancy in disclosure and some distrust of therapist.

Client may question therapist about his/her level of honesty. There may be considerable evidence of dislike of the therapist as a result, including negative voice tone.

7 = Client shows extreme distrust of the therapist, and/or accuses therapist of not being honest about his/her views of the client.

**21. The client feels confident in the therapist's ability to help the client.**

1 = Client expresses extremely little or no hope for therapy outcome. The client questions the therapist's ability to a great extent. The client is resistant to therapist suggestions or attempts to help.

2 = Client expresses considerable doubts, frustration, and pessimism, and may question therapist directly about his/her qualifications or understanding of the client's experience.

3 = Client expresses some doubts about the usefulness of therapy, in regards to the therapist, process, or outcome. The client may doubt that the therapist is truly understanding his/her problems or doubt the interventions/homework/etc. given during a problem-solving phase.

4 = No evidence or equal evidence regarding client confidence and/or doubt.

5 = Client expresses some confidence in the therapist's ability, either by praise or an optimistic view about the outcome of the therapy as the result of a collaborative process (rather than thinking that the client him/herself is doing all of the work).

6 = Client believes in the therapist's competence level to a great extent, and this may be evident in the client's expressions about the usefulness of therapy or praise of the therapist.

7 = Client consistently agrees with therapist reflections and interventions/guidance, while also discussing the virtues of the therapy and/or the therapist a few times during the session.

**22. The client and therapist are working on mutually agreed upon goals.**

1 = Topics change constantly and abruptly without consideration of the other, mostly after

interruptions by either participant. There is a good deal of clashing over the appropriateness, definitions, and/or boundaries of the client's goals.

2 = Topics shift somewhat frequently before resolution or closure. The therapist may interrupt and redirect focus onto a less relevant topic without prompting from the client. Friction between the participants becomes evident – one or both may show dissatisfaction with the change in topics or the pace of therapy in general.

3 = Some shifts are induced from a relevant to another relevant or non-relevant topic by either participant before closure has been established for the original topic. This is indicated by interruptions or ignoring the other's statement and moving on.

4 = No evidence or equal evidence regarding collaboration on in-session goals.

5 = Some evidence that participants are making progress towards in-session goals via discussion of relevant topics.

6 = Considerable progress made towards goals through thoughtful discussion of topics that both participants agree are relevant. Participants frequently agree with each other about what they are currently doing.

7 = Participants completely agree upon goals through extremely productive discussions of more than one relevant topic. Participants almost always reach closure on current topic that the client recognized as a goal, before shifting to another relevant topic.

### **23. The client feels that the therapist appreciates him/her as a person.**

1 = Client accuses the therapist of being uncaring, inconsiderate, and inattentive to his/her concerns several times.

2 = Client perceives the therapist as mechanical, distant, and/or uncaring, by voicing these concerns to the therapist. Client may demonstrate some contempt.

3 = Client expresses some doubts about whether the therapist cares for him/her, by subtly mentioning this to the therapist in passing during discussion of other topics. The client may show some nonverbal signs of withdrawal, displeasure, or frustration, in response to feeling unappreciated.

4 = No evidence or equal evidence regarding client's feelings about therapist appreciation or disregard.

5 = Therapist expresses some nonjudgmental acceptance, warmth, empathy, personal interest, and/or sensitivity to the client and his/her situation that the client responds to in some fashion.

6 = Some direct client acknowledgement of therapist warmth, acceptance, and/or understanding. The client feels concern/support from the therapist and is comfortable and at ease during most of the session.

7 = Client feels that the therapist likes him/her, and expresses gratitude for the relationship or compliments the therapist's ability to empathize.

### **24. There is agreement on what is important for the client to work on.**

1 = Therapist does not allow client to move on to different topics or the participants become very confrontational about the therapy process.

2 = Considerable disagreement is evident between the participants on what the client should be doing in therapy, through directly voiced opinions about therapy productivity that conflict with the other's views about it.

3 = Some disagreement is present between the participants on what the client should be working on currently or in the future. The client may want to spend a different percentage of the session time on certain topics than does the therapist.

4 = No evidence or equal evidence regarding agreement and/or disagreement.

5 = Client is somewhat responsive to the therapist's intention and the therapist is somewhat responsive to client focus or need. The therapist facilitates client exploration to some extent.

6 = Therapist is frequently willing to explore client issues and is very receptive to modifications by the client. Both participants respond positively to each other's exploration of topics and/or issues.

7 = Participants seem to consistently agree on the importance and appropriateness of the tasks and issues, openly agree to work on certain issues, and demonstrate flexibility by following each other's leads when integrating new topics into the session.

## **25. As a result of these sessions there is clarity about how the client might be able to change.**

1 = Client is extremely confused most of the time about the entire change process.

2 = Client is frequently confused about how to change. The client asks a number of questions regarding the change process. Tasks are unclear or unrelated to the goal. Sessions may end abruptly while client is still actively seeking answers and/or closure.

3 = Client is sometimes unclear as to how change will occur. Tasks do not seem to be very well defined or related to the goals of therapy.

4 = No evidence or equal evidence regarding clarity and/or confusion.

5 = There is some degree of focus on the future and the change process, including some discussion the client's current state and how it might be improved. This may include an agreement or promise to talk about a specific, relevant topic in the future.

6 = Client talks about positive change in a way that indicates understanding of how change will occur. Expectations, tasks, and/or goals are stated clearly.

7 = Client is extremely optimistic about the prospects of therapy leading to positive changes because he/she has a clear idea of how to go about it.

## **26. There is mutual trust between the client and therapist.**

1 = Client states outright that he/she does not trust the therapist at all. The client does not openly discuss any significant issues. The therapist demonstrates a complete lack of confidence in the client's ability to discuss significant issues.

2 = Participants are considerably distrustful of each other. The client is very guarded in disclosing any intimate content, while the therapist also shows a lack of comfort. Questions concerning trust may arise.

3 = Participants are somewhat distrustful of each other. Client is a bit guarded in terms of content disclosed. Therapist may show a few signs of lack of comfort about the therapy situation.

4 = No evidence or equal evidence regarding mutual trust between the participants.

5 = Some willingness by the client to disclose personal concerns and some therapist acceptance of the client's statements at face value. The therapist does not override or interrupt a client's train of thought by redirecting focus.

6 = Client is receptive to therapist reflections, challenges, and/or suggestions, and discloses a

considerable amount of more intimate/relevant information regarding his/her problem(s). The therapist seems comfortable with the overall situation and is not defensive at all. The client may express confidence in the therapist.

7 = Participants have complete faith in each other. The client is very comfortable about disclosing extremely intimate details or problems, and the therapist feels extremely comfortable.

## **27. The client and therapist have different ideas about what the client's real problems are.**

1 = Participants consistently agree on the nature of the client's problems and goals.

Congruency in problem solving is clearly evident. Both often identify the same issues.

Participants feel that the session is very productive.

2 = There is considerable agreement on the client's true problems. The therapist is willing to explore client problems and current feelings, and the client openly follows and/or provides the direction of the discussion.

3 = Participants show some agreement about the issues that the client faces.

4 = No evidence or equal evidence regarding agreement and/or disagreement.

5 = Participants show some disagreement about what the client's problems are.

Either may question the other's response regarding client problems.

6 = One participant brings up a topic but the other ignores it or disagrees with its relevance.

Confrontations of some sort arise as a result. There may be signs that one or both participants become defensive at times.

7 = Client either strongly disagrees or argues with therapist about what his/her problems really are. The therapist may refer to what he/she believes is the "real problem" and may thereby discount the client's perceptions of the problem. The therapist abruptly shifts topics and/or constantly interrupts with no regard for the client's concerns or current state.

## **28. Both the client and therapist see their relationship as important to the client.**

1 = Client does not respect the therapist. The therapist may make frequent interruptions or seem uninterested indicating that he/she is not fully invested in the relationship. The client may frequently make derisive remarks towards the therapist. If the client opens up at all it is most likely a negative comment (e.g., "I feel that I am not getting what I need from you"). The client may be considering leaving therapy or is being forced to attend.

2 = Client puts little effort into the relationship. The client does not fully participate and rarely opens up. If the client does open up, it may be with a negative comment (e.g., "I feel that I am not getting what I need from you"). The client has little respect for the therapist. The client may not respect the therapy hour, arriving late or missing sessions.

3 = Client is not fully invested in the relationship. The client does not open up a great deal. The client may express a negative comment about the relationship.

4 = No evidence or equal evidence regarding importance and/or unimportance.

5 = Client puts some effort into the relationship, task participation and speaking about relevant topics.

6 = Client believes in the process and speaks freely about relevant topics. The client believes in therapist as the facilitator of change. The client looks forward to future sessions and may show concern about any breaks in therapy, such as a therapist or client vacation, etc.

7 = Participants believe that this relationship and the process of therapy will bring about change. This client is highly invested in therapy, and it is evident that he/she spends considerable time

working on therapy homework or contemplating therapy outside of the therapy hour. Any breaks in therapy would be taken seriously by the client and could cause discomfort.

**29. The client fears that if he/she says or does the wrong things, the therapist will stop working with him/her.**

1 = Client is forthcoming about all issues without fear of reprisal. The client shows that he/she is willing to discuss process concerns: displeasure with process, displeasure with outcome, lack of effort, and/or not doing homework. The client also expresses no fears.

2 = Client is forthcoming about most issues, but may hold back somewhat with certain items. The client does not seem to be very concerned with being judged.

3 = Client seems somewhat secure in relationship and is forthcoming about some issues.

4 = No evidence or equal evidence regarding client fears and/or comfort level.

5 = Client seems tentative to say some things. The client may be embarrassed and may express some concerns that he/she will be judged.

6 = Client openly talks about being judged or the therapist stopping working with him/her. The client may directly question whether the therapist is judging him/her.

Also, the client may test this notion by revealing some past transgressions.

7 = Client seems convinced that his/her comments will be judged harshly and/or that the therapist will stop working with him/her if the client says something of which the therapist disapproves. The client appears to be ashamed of his/her thoughts or feelings, and is extremely resistant to exploration.

**30. The client and therapist collaborated on setting the goals for the session.**

1 = Participants are almost always non-responsive to each other's initiations. They both switch topics often without respecting the other. The participants seem to be locked in a power struggle. The session seems chaotic.

2 = Participants are often non-responsive to each other's initiations. They often switch topics without waiting for the other. The session seems to progress randomly. There does not seem to be a great deal of logic to the way the initiations and topics are unfolding.

3 = Participants are sometimes non-responsive to each other's initiations. They may sometimes switch topics without waiting for the other.

4 = No evidence or equal evidence regarding collaboration and/or discord.

5 = Participants seem to agree and respond to each other. Topics may not flow smoothly at all the times.

6 = Initiations and topics almost always flow smoothly except for one or two awkward moments where the discussion gets stalled. Participants collaborate to determine in-session goals.

7 = Participants always respond to each other's initiations and change topics together. The session has a flowing quality. There is strong agreement on the goals of the session.

**31. The client is frustrated with what he/she is being asked to do in the therapy.**

1 = Client is excited about all tasks in therapy. This enthusiasm may be verbalized or displayed through participation. The client may say things such as, "that was helpful," or even make suggestions about how to improve performance on in-session tasks.

2 = Client seems pleased and generally interested in most tasks and is able to perform most of the tasks well.

3 = Client seems cooperative. Although the client may not be able to perform all tasks perfectly, the client retains a positive attitude towards therapy.

4 = No evidence or equal evidence regarding frustration and/or satisfaction.

5 = Client shows minor frustration or shift tasks. The client may not understand tasks perfectly or may not need a re-explanation. May not be able to perform some tasks well. The client may have a good idea of the steps necessary for change but does not seem to be prepared to take action.

6 = Client spends considerable time resisting the task or is unable to do task. The client may require re-explanation of tasks and may still have difficulties after clarification. The client may show considerable annoyance, and may use sighs, body language, facial expressions or statements to display frustration.

7 = Client is unable or unwilling to perform most tasks. The client may not have the patience to wait for re-explanation. The client openly voices frustration in addition to frowning and sighing.

### **32. The client and therapist have established a good understanding of the changes that would be good for the client.**

1 = Participants misunderstand each other. They have open disagreements about the process of change. The client voices concerns that he/she seems to be moving towards changes that he/she does not want or that the methods being used will not lead the client towards desired changes.

2 = Client expresses doubts that he/she can change or about methods the therapist is suggesting to bring about change. The client voices some concerns about the change process.

3 = Client may be going through what seems to be productive exercises, but it is not clear to the client and/or therapist how change will occur. It may seem that the client does not see how the process will help him/her.

4 = No evidence or equal evidence regarding understanding and/or misunderstanding.

5 = There is some evidence that the participants understand changes that would be good for the client. Understanding may be gathered from compliance and other non-verbal signs of understanding and need not be explicitly stated.

6 = Participants discuss where the client stands and where he/she is going, through discussion of the client's current situation, desired goals, and methods for achieving them.

7 = Both the process and ultimate changes hoped for have been made explicit. Throughout the session the participants have open discussions of the client's goals and methods for achieving these goals. At the end of the session they may summarize progress made towards the goals. Everything they do seems to fit within their treatment plan.

### **33. The therapy process does not make sense to the client.**

1 = Client has a strong understanding of the therapy process. The client actively collaborates with the and seems to have a thorough understanding of why in-session and homework tasks are necessary. This may not always be spoken. The client is almost a co-facilitator of his/her own therapy.

2 = Client has a considerable understanding of the therapy process The client rarely expresses a doubt openly nor does he/she attempt to implement a different strategy.

3 = Client has some understanding of the therapy process The client does not often try to change



tasks or express doubts.

4 = No evidence or equal evidence regarding confusion and/or understanding.

5 = Client shows signs that he/she is uncertain about what to do or that what he/she is doing will be beneficial. Signs may include topic shifts, awkward pauses, and/or frustrated expressions, bodily movements or vocalizations.

6 = Client verbally expresses doubt and confusion and may attempt to shift to a different topic or task.

7 = Client voices strong doubts persistently: challenging the therapist, suggesting other techniques and/or using different strategies (e.g., the therapist wants to use cognitive techniques while the client prefers a psychodynamic approach).

### **34. The client doesn't know what to expect as the result of therapy.**

1 = Client has a good understanding of what will be affected by therapy. The therapist vocalizes what he/she is working towards and the client also understands how he/she will be improved at the end of therapy. The client may vocalize how he/she is going to get better and/or may discuss the improvements that have already taken place.

2 = Client does not seem to have any doubts regarding the benefits of therapy and has a good idea of how he/she will get better as well.

3 = Client seems to have some idea what to expect as a result of therapy. This need not be explicitly stated, but can be demonstrated by the client's comfort in following the tasks of therapy.

4 = No evidence or equal evidence regarding client expectations and/or doubts.

5 = Client seems somewhat confused about what to expect. The client may ask a question or just seem unconfident about where things are going.

6 = Client openly expresses doubts about getting better. The client may ask several questions about therapy, particularly how his/her desired outcome will be reached.

7 = Client expresses strong doubts. The client does not know how he/she is going to improve and challenges the therapist about it.

### **35. The client believes that the way they are working with his/her problem is correct.**

1 = Client questions the process and does not believe in the tasks he/she is doing.

The participants make little or no progress. The client openly disagrees with the therapist. It may appear that more time is spent arguing than doing therapy.

2 = Participants often disagree but seem to be able to work together for part of the session. The client expresses some doubts about the therapy process.

3 = Client sometimes voices concerns about a technique, but he/she usually resolves the difference and find something else to work on for most of the session.

4 = No evidence or equal evidence regarding client beliefs about his/her problem being handled correctly and/or incorrectly.

5 = Client expresses some agreement about certain tasks in therapy. This agreement can be expressed by compliance and other non-verbal signs of agreement and need not be explicitly stated.

6 = Client expresses considerable agreement with the way the therapist and client are working. The client may become more actively involved in therapy, make suggestions to further the tasks

of therapy, or voice satisfaction about the work.

7 = Client is thrilled with the way the therapist and client are working on problem. The therapy is close to the client's ideal therapy. The client either voices his/her level of satisfaction and/or displays high levels of collaboration and enthusiasm.

**36. The client feels that the therapist respects and cares about the client, even when the client does things the therapist does not approve of.**

1 = Client states that he/she is unwilling to discuss certain topics or he/she displays nonverbal reluctance. The client does not feel respected and may openly challenge the therapist about the lack of caring and/or disrespectful attitude.

2 = Client withholds some information that the therapist may disapprove of because he/she feels that respect and caring are often lacking.

3 = Client shows some tentativeness due to the fact that he/she feels that respect and caring is sometimes lacking.

4 = No evidence or equal evidence regarding respect and/or disrespect.

5 = Client feels some respect and caring from the therapist. While the client is able to converse freely, he/she is probably not comfortable enough to voice topics of which the therapist may disapprove.

6 = Client feels respected and cared for, allowing the client to speak freely. He/she probably feels comfortable enough to voice topics of which the therapist may disapprove. The therapist may contribute to the client's sense of comfort by acting in a warm and non-judgmental manner.

7 = Client feels very respected and cared for, allowing the client to open up. The client is comfortable enough to discuss certain topics of which the therapist might disapprove: problems in the therapy relationship, failures to do homework, lack of effort towards goals, canceling sessions, etc. The therapist contributes to the client's sense of comfort by acting in a warm and nonjudgmental manner.

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## Working Alliance Inventory

Form O

### Instructions

On the following pages there are sentences that describe some of the different ways a therapist/client dyad may interact in therapy.

If a statement describes the way you always (consistently) perceive the dyad, circle the number 7; if it never applies to the dyad, circle the number 1. Use the numbers in between to describe the variations between these extremes.

This questionnaire is CONFIDENTIAL; neither the therapist, client, nor the agency will see your answers.

Work fast, your first impressions are the ones we would like to see. (PLEASE DON'T FORGET TO RESPOND TO EVERY ITEM.)

Thank you for your cooperation.

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	1. There is a sense of discomfort in the relationship.					
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
	2. There is agreement about the steps taken to help improve the client's situation.					
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
	3. There is concern about the outcome of the sessions.					
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
	4. There is agreement about the usefulness of the current activity in therapy (i.e., the client is seeing new ways to look at his/her problem).					
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
	5. There is good understanding between the client and therapist.					
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
	6. There is a shared perception of the client's goals in therapy.					
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
	7. There is a sense of confusion between the client and therapist about what they are doing in therapy.					
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
	8. There is a mutual liking between the client and therapist.					
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
	9. There is a need to clarify the purpose of the sessions.					
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
	10. There is disagreement about the goals of the session.					
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
	11. There is a perception that the time spent in therapy is not spent efficiently.					
1	2	3	4	5	6	7

	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
12.	There are doubts or a lack of understanding about what participants are trying to accomplish in therapy.						
1	2	3	4	5	6	7	
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always	
13.	There is agreement about what client's responsibilities are in therapy.						
1	2	3	4	5	6	7	
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always	
14.	There is a mutual perception that the goals of the sessions are important for the client.						
1	2	3	4	5	6	7	
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always	
15.	There is the perception that what the therapist and client are doing in therapy is unrelated to the client's current concerns.						
1	2	3	4	5	6	7	
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always	
16.	There is agreement that what the client and therapist are doing in therapy will help the client to accomplish the changes he/she wants.						
1	2	3	4	5	6	7	
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always	
17.	The client is aware that the therapist is genuinely concerned for his/her welfare.						
1	2	3	4	5	6	7	
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always	
18.	There is clarity about what the therapist wants the client to do.						
1	2	3	4	5	6	7	
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always	
19.	The client and the therapist respect each other.						
1	2	3	4	5	6	7	
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always	
20.	The client feels that the therapist is not totally honest about his/her feelings toward her/him.						
1	2	3	4	5	6	7	
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always	
21.	The client feels confident in the therapist's ability to help the client.						
1	2	3	4	5	6	7	
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always	

22.	The client and therapist are working on mutually agreed upon goals.					
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
23.	The client feels that the therapist appreciates him/her as a person.					
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
24.	There is agreement on what is important for the client to work on.					
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
25.	As a result of these sessions there is clarity about how the client might be able to change.					
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
26.	There is mutual trust between the client and therapist.					
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
27.	The client and therapist have different ideas about what the client's real problems are.					
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
28.	Both the client and therapist see their relationship as important to the client.					
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
29.	The client fears that if he/she says or does the wrong things, the therapist will stop working with him/her.					
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
30.	The client and therapist collaborated on setting the goals for the session.					
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
31.	The client is frustrated with what he/she is being asked to do in the therapy.					
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always

32. The client and therapist have established a good understanding of the changes that would be good for the client.
- |       |        |              |           |       |            |        |
|-------|--------|--------------|-----------|-------|------------|--------|
| 1     | 2      | 3            | 4         | 5     | 6          | 7      |
| Never | Rarely | Occasionally | Sometimes | Often | Very Often | Always |
33. The therapy process does not make sense to the client.
- |       |        |              |           |       |            |        |
|-------|--------|--------------|-----------|-------|------------|--------|
| 1     | 2      | 3            | 4         | 5     | 6          | 7      |
| Never | Rarely | Occasionally | Sometimes | Often | Very Often | Always |
34. The client doesn't know what to expect as the result of therapy.
- |       |        |              |           |       |            |        |
|-------|--------|--------------|-----------|-------|------------|--------|
| 1     | 2      | 3            | 4         | 5     | 6          | 7      |
| Never | Rarely | Occasionally | Sometimes | Often | Very Often | Always |
35. The client believes that the way they are working with his/her problem is correct.
- |       |        |              |           |       |            |        |
|-------|--------|--------------|-----------|-------|------------|--------|
| 1     | 2      | 3            | 4         | 5     | 6          | 7      |
| Never | Rarely | Occasionally | Sometimes | Often | Very Often | Always |
36. The client feels that the therapist respects and cares about the client, even when the client does things the therapist does not approve of.
- |       |        |              |           |       |            |        |
|-------|--------|--------------|-----------|-------|------------|--------|
| 1     | 2      | 3            | 4         | 5     | 6          | 7      |
| Never | Rarely | Occasionally | Sometimes | Often | Very Often | Always |

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